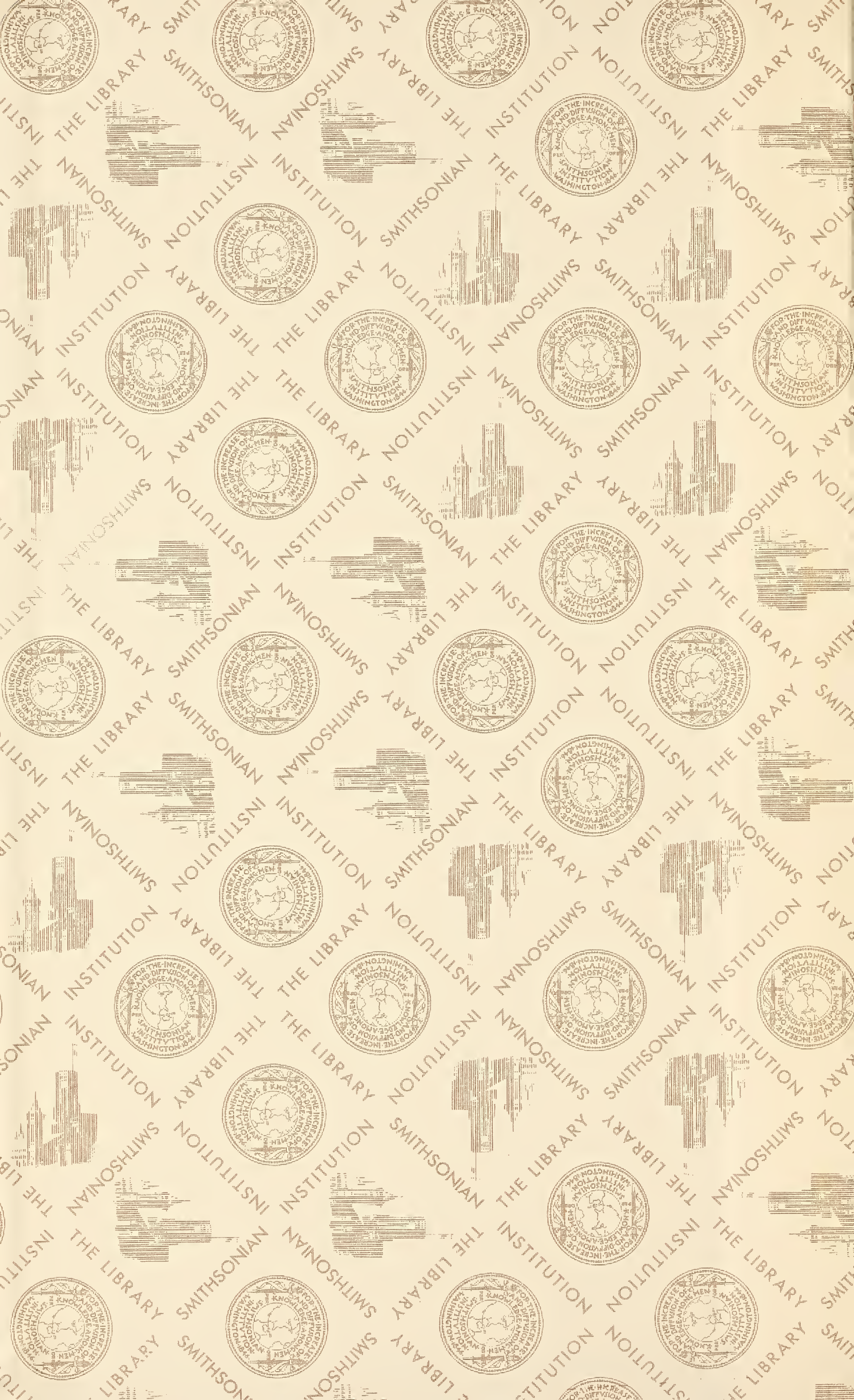
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# *The Migrant*

A Quarterly Journal Devoted to

## BIRDS OF TENNESSEE

Volumes 33, 34 and 35

1962 — 1963 — 1964

Edited by
Lee R. Herndon

Published by the
TENNESSEE ORNITHOLOGICAL SOCIETY
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Birds

Division of Birds

# THE MIGRANT

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THE TENNESSEE
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Upper.—Young Peregrine Falcons on nest ledge of cliff. Photo by by Walter Spofford.

Lower.—The cabin on Siler's Bald; Albert Ganier at left. June 1920.

THE MIGRANT

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VOL. 33 MARCH 1962 NO. 1

# SOME NESTING RECORDS FROM THE SMOKIES

By ALBERT F. GANIER

The high altitudes and coniferous forests of the mountain chain which we call the Great Smoky Mountains present an environment of unusual ornithological interest. Many of the summits in this chain rise to more than 5,500 feet above sea level, including Mt. Guyot 6,621′, Laurel Top 5,900′, Clingman's Dome 6,642′, Siler's Bald 5,620′, Thunder Head 5,530′, etc. The southern limit of the balsam-spruce forest ends only a little southwest of Clingman's and with it terminates the southern range of several species of birds belonging to the Canadian zone fauna. The possibilities for ornithological work in this unique Tennessee area led to my making a series of investigations beginning in 1920 and continuing nearly every year until 1933. Again, in 1938, the writer organized a foray, composed of 17 T.O.S. members, which spent the time from 13 to 20 June, working the summits chiefly to determine the altitudinal distribution of the various species. The results of this expedition were published in THE MIGRANT for September 1938. Some of the results of earlier field work has been published elsewhere, as cited in the appended bibliography. The inaccessibility of some of these publications, together with availability of new observations and breeding records, make it desirable that those covering the more unusual species be brought together in this paper for more convenient reference. I might add that during these years I gave particular attention to finding nests of each species in order to establish definite breeding records for the State. At least one set of eggs was collected of each for the purpose of adding to my comprehensive collection of birds of Tennessee and to definitely authenticate my records.

Prior to the establishment of the National Park in 1930, the summits were practically inaccessible. In my first stay, 27 May to 3 June, 1920, I was unaccompanied and made headquarters at Elkmont. From there, early each morning I rode the logging train of the Little River Lumber Co., up the forested valley of the Rough Creek prong some 5 or 6 miles to where the timber cutters were felling the primeval forest. From this point to the summit of Siler's Bald was a four mile hike along a dim and very steep trail. From there I could follow the State line westward or as far east as Clingman's Dome. No ornithological work had ever been done here before and the experience, with new birds in an entirely different environment, was exhilarating. In 1924, I organized a party to camp on top of Siler's Bald for further study and from 29 May to 5 June, our party of five made ourselves quite comfortable in a little one room, windowless log cabin, with stone chimney and dirt floor, owned by the lumber company. The members of this party beside myself were G. R. Mayfield and Edgar McNish of Nashville, Harry P. Ijams of Knoxville and Andy Gregory of Elkmont. Andy was the surveyor for the lumber company and knew every inch of the wild area, regaling us with mountain lore and woodsman's knowledge. As the new park blazed and blasted its road to New Found Gap, it became possible to do the summits from Clingman's Dome to Mt. LeConte and on to Laurel Top. Prior to that, LeConte had only been accessible by a long, tortuous trail from Gatlinburg. Because of the ban against collecting specimens in the Park area, even for scientific purposes, the writer transferred his high altitude activities to Roan Mountain on the north and to the Unicois to the south, both of which have been reported on in this journal.

Localities referred to are as shown on the U.S.G.S. topographic map of the Great Smoky Mountains National Park. The dates of egg laying varies with the altitude and since the foliage on top is not well developed before 1 June, egg deposition there for most species is after that date.

The following nesting records are here submitted.

**Turkey Vulture.** *Cathartes aura.* These picturesque additions to the mountain landscape find safe nesting places among the rocks forming the occasional escarpments. In such a location, I found a nest containing a young bird, nearly as large as its parents, on 3 June, 1925. This was at the Cat-stairs cliff, 4,700′, just north of the Greenbrier valley.

**Peregrine Falcon** (Duck Hawk). *Falco peregrinus.* The finding of a nesting pair of this famous bird in the Smokies was one of my earliest and most keenly anticipated objectives. Because of their very early nesting habits the birds are usually gone from their nesting eyries at the time most observers elect to visit the high altitudes. On 7 June, 1928 however, I observed two of the falcons soaring about over the Devil's Backbone cliff across the canyon from Alum Cave bluff. Making my way around and to the top of the Backbone and peering over with the aid of a safety rope, I discerned a ledge 20 feet below the summit that showed from recent usage it had been the nesting site. The following spring I enlisted the help of my good and able friend Brockway Crouch of Knoxville to help me get to the eyrie in order to collect my first set of eggs of this species. We had a three mile hike from the road's end and were heavily laden with packsacks containing ropes, rope ladder, cameras, lunch, etc., arriving at the site, mid-day, 7 April. We flushed the incubating female from a ledge different from last year's site but about the same distance from the top. Tying our rope ladder to kalmia bushes, we descended and found three reddish brown eggs laid in a depression of soft shale and decayed vegetation. On preparation later, the eggs were found to have been incubated from 14 to 17 days, meaning that 20 March would have been the approximate date for laying of the first egg. Both birds made defense demonstrations in the air, particularly the female which was very demonstrative. We took photos of the bird diving toward us as well as of the cliff and these were reproduced later in **The Wilson Bulletin** of March, 1931, together with a more detailed description, as well as of a similar eyrie I had found in an escarpment of the Cumberland plateau. Crouch visited the Devil's Backbone eyrie again on 17 May, 1931 and found it still in use with three young ready for flight. On descending to the ledge the young flew off but one returned and was captured. Bones and feathers of two American Bitterns and a Red-breasted Merganser were on the ledge. I have seen Peregrines at other likely nesting cliffs in the Park and believe several pair nest there. During the incubation period they are not apt to be seen near the eyrie.

**Ruffed Grouse.** *Bonasa umbellus.* Regularly distributed and found at all altitudes, especially about the balds. My first nest was found 1 June 1920, in the recently cleared right-of-way for the logging railroad at elev. 4,000′. The bird flushed just ahead of me and flew noiselessly away at a low height. The nest contained eight eggs incubated about twenty days. The nest was built in a depression spanned by a four inch, fern-covered birch root. On 1 June 1924, I found a nest with seven fresh eggs on Siler's Bald at elev. 5,500′. This was in an open wooded area, grown up in dwarf beech. It was placed against a small tree and the nest was made entirely of beech leaves. The sitting bird flushed at fifteen feet. On top of Mt. LeConte, at 6,500′, I found a nest in the one-acre clearing there containing several addled eggs. Parent birds with young were encountered a number of times in June along the trail and they put on a fearless demonstration in order to distract attention from their brood.

**Chimney Swift.** *Chaetura pelagica.* On 30 May 1925, one of a pair was seen flying in and out of a hollow tree near the top of Siler's Bald and it is logical to assume that it was prospecting for a nest site in the absence of chimneys. Quite a number of these birds may be seen feeding over the balds in summer, even on top of LeConte, and it is probable that some revert to their prehistoric nesting sites.

**Belted Kingfisher.** *Megaceryle alcyon.* It seemed a bit out of place to find these birds following and living along the wild, overgrown mountain streams, miles from open country. Pairs were found on Jake's creek at 2,700′ and on Rough creek at 3,000′, deep in the forest. The latter pair had excavated a nest hole in the recently made railroad cut and one was seen entering it on 2 June 1920.

**Yellow-bellied Sapsucker.** *Sphyropicus varius.* Pairs were seen on Siler's Bald, 5,200′, and others on Chestnut Ridge and Miry Ridge at 4,700′. At the latter location, 31 May 1920, one of a pair entered and remained in a newly made nest hole, 50′ up in a limbless dead hemlock. The male was collected and its l-w-t measurements of 205, 120 and 63 mm proved it to be the new race *S. v. appalachiensis* which I described later (Ganier - 1954).

**Common Raven.** *Corvus corax.* Although I had sought for a nest of this species on each of my trips it was not until 4 May 1960 that I first viewed an occupied nest. The Raven habitually chooses an inaccessible ledge on the face of a high vertical cliff and such sites are few and far between in the Smokies. In the Pennsylvania mountains it has often been found to nest in spruce forests, constructing a bulky nest far up in the tree. Since there are at least several pairs resident along the summits of the Smokies, it may be that some do likewise here. On the above date, which was the day before the convening of the Wilson Ornithological Society meeting at Gatlinburg, I took several members up the LeConte trail to Alum Cave bluff. At an overlook just short of our destination we were directly across the canyon from the Devil's Backbone cliff in which I had previously found the Peregrine eyrie. Scanning the cliff with binoculars, I soon saw a Raven fly in from a low level and alight on a ledge by a nest. In the nest were at least three well feathered young and as soon as these were fed the parent left. Realizing our good fortune, we watched the nest for nearly an hour, at a distance of about 500 yards and saw adults come in twice more. On one trip, when a Raven came in from above the cliff, it was attacked by a Peregrine Falcon which we had not seen up to this point. (When eggs are in the Falcon's nest earlier in the season the Ravens

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would doubtless eat them if left unguarded.) The nest was built about half-way up the 150′ sheer cliff. A dead hemlock a hundred feet away, served as a lighting point for one of the young that was seen to leave the nest the following day. Some years ago, Brockway Crouch showed me a photograph of a Raven's nest built on a ledge of another cliff but this one was unoccupied at the time. Rigorous weather conditions on the snow-clad summits in winter doubtless shortens the life of these rare and spectacular birds and it would seem wise for park rangers to supply food for them at such times.

**Red-breasted Nuthatch.** *Sitta canadensis.* On 2 June 1925, two pair were found excavating nest holes in dead spruce trees on the western slope of Clingman's Dome, altitude 6,100′. Since this was the first nesting record for the Southeast, I made a special trip from Nashville 12 days later to collect the eggs and to reexamine unfinished nests of other birds. On climbing to the nest, with spurs and safety belt, I found the bird incubating and as I opened the cavity I had to toss her away. She immediately returned and insisted on trying to reenter. I put her in my coat pocket but she was soon out again and interfering with my packing up the six fresh eggs. The specimen's were carefully preserved for further reference. The bird had smeared sticky pitch all around the lower half of the entrance hole, presumably for the purpose of keeping out ants and perhaps other predators. This is a customary habit of this species. The other nest cavity was not occupied and had probably been abandoned. These Nuthatches are regularly found along the summits where the fir and spruce make dense stands and where the ecological complex is that of the Canadian zone.

I had laid out too much to do on this one day and night with drizzling rain overtook me before I could come upon the dim trail from Siler's down to the lumber camp. I was fortunate however to be able to locate the little log cabin among the trees of the north slope and to gain a cold night's lodging, not thru the padlocked door but down the rude stone chimney.

**Brown Creeper.** *Certhia familiaris.* The Creepers were found to use the same habitats as that of the preceding species and it was not until our 1938 foray that I found a nest. This one was found 14 June, just six feet above the trail north of New Found Gap. It was tucked behind the loose bark of a large dead spruce tree. One of the birds was seen upon the tree trunk above the nest and suddenly disappeared behind the bark where it had buckled two inches out from the trunk. Tell-tale shreds of nest material projected and on examination, a small nest composed of dead sprucewood fibres was found. The nest was nearly completed and we watched the bird bringing in additional material. Another nest, also under construction and similarly located was found the same day. A third nest, found 19 June, was located on the Skyline Drive west of New Found Gap. This one was forty feet above the ground in a tall dead spruce that had been killed by blasting. The bark was intact except at the nest site, where it had cracked and sprung away from the trunk. The Creeper was seen to fly to this tree, to enter the crack and to remain some time. Securing a permit from Park authorities to investigate further, I climbed to the nest and found it to contain five eggs, nearly fresh. This nest was built of small dead spruce twigs, fibres of dead sprucewood and lined with soft shreds from inside spruce bark.

**Winter Wren.** *Troglodytes troglodytes.* The subspecies present in the Smokies is a dark plumaged form described by Thos. H. Burleigh in 1935. It was found present in breeding season at altitudes from 3,500′ to the summits. The nest is difficult to find because of being built on the ground or between tree roots where it is covered over by the everpresent green moss. On 21 June 1933, I was fortunate enough to find a nest with five young, 75 feet above the trail from the Gap to LeConte, altitude 5,500′. Attracted by calls from the parent birds, I began to look closely in all probable sites along the banks of the little ravine. Presently I noticed a small black hole in the green moss and opening it slightly, out flew a young one on its initial flight. It was at once followed by its nest-mates until five had emerged and flown from twenty to thirty feet to join their vociferous parents. The nest, which I collected, is a round ball of soft materials five inches in diameter and included in its soft lining are small feathers of the Ruffed Grouse. It had been tucked among the roots of a tree behind the moss. This was the first nest to be recorded from our southern mountains.

**Robin.** *Turdus migratorius.* To those of us who associate this bird with city lawns, villages and farmsteads, it comes somewhat as a surprise to find them well distributed along the mountain tops. These birds are of a wild and elusive strain and most often located by their garrulous song. Many nests were found among the stunted beech trees near the summits or else saddled on fairly low horizontal limbs of spruce and hemlock. From some of the latter nests hung long, trailing strands of usnea moss, making them both conspicuous and attractive. Most of the nests examined held but three eggs or young.

**Veery.** *Hylocichla fuscescens.* This species, formerly known as the Wilson's Thrush, would be rated rare but for its penetrating call-notes which may frequently be heard in the forests from 3,000′ upward. I have found it shy, elusive and difficult to approach for close inspection. I have examined many of their nests but have rarely gotten a view of the birds as they slipped away. The nests are most often saddled on the low horizontal limb of a conifer or else in sprouts from some broken tree or bush. They are well and compactly made like those of the Wood Thrush. Along the summits, the three or four eggs are laid the first week in June.

**Solitary Vireo.** *Vireo solitarius.* The wild "screechy" song of this vireo may be heard at all altitudes for its is a fairly common species. It nests earlier than most of its neighbors, constructing a well formed pouch suspended in the fork of a low, pendant limb. The nest is ornamented prettily on the exterior with small blue-green lichens tied on with white spider silk. While on their nests, they are nearly fearless and sometimes may be stroked with a pencil before they leave. My first nest of this species was on Miry Ridge, 4,500′ alt., on 31 May 1920. It held 3 eggs, incubated about one week and was near the top of a small hemlock in the forest. The nest lining was of fine grasses.

**Black-throated Blue Warbler.** *Dendroica caerulescens.* This is one of the most characteristic birds of the Park and a rewarding species to become acquainted with because it is easily found at all altitudes above 3,000′. Their nests however are not often found because they are most often built in the "jungles" of rhododendron or leucothea (dog hobble), from two to five feet above the ground. All of about a dozen nests found were near a brook or spring. My first nest was found on Blanket Mountain at 4,000′ 1 June 1920, and contained three nearly fresh eggs. This one was unusual in that it was above the laurel belt in rather thin woods and was built, a foot up, in one of the many little hemlock trees that had sprung up. Their nests are closely woven little cup-shaped affairs tied to three or more upright twigs. When the birds are sitting, only the upright beak and tail show above the rim. The white spot on the folded wing of the demurely clad female affords a quick means for her identification.

**Ovenbird.** *Seiurus aurocapillus.* A nest of this ground dwelling warbler was found 1 June 1920, on Miry ridge at alt. 4,800′. It contained four young about three days old and was built on the ground as usual.

**Canada Warbler.** *Wilsonia canadensis.* Of the twenty-two summer resident warblers of the Park area, the nest of this species is one of the most difficult to locate. This is because of the fact that they are built on the ground and well hidden by growing plants and forest litter. On 15 June 1938, our party enroute to Andrews Bald heard one of the birds just off the trail and found them disturbed when we vainly sought to find their nest. Miss Mabel Slack and the writer decided to watch the birds from chosen lookouts in hopes they would reveal the location. This tactic proved successful after nearly half an hour. The nest with its three fresh eggs were then found, well hidden on the steep slope among litter and plant growth.

**Rose-breasted Grosbeak.** *Pheucticus ludovicianus.* The high altitude associations of the southern Appalachians here finds this species at nearly the southern limit of its breeding range and its song, much like that of the Robin but more spirited, can often be heard. Several nests were found in bushes and small trees at an average height of eight feet. My first nest was on 1 June 1920, on Chestnut Ridge, alt., 4,300′. This nest contained three eggs with incubation advanced and was nine feet up on small branch of a hydrangia bush on wooded slope. The nest was like that of a Cardinal except that it had no leaves in it and the eggs could be seen from below thru the lining of black rootlets.

Many more species of lesser interest could be included but these would be beyond the scope of the present paper. Also, the nests of a number of the rarer species have not as yet been found. Compared with lower altitudes, birdlife of the summits is relatively scarce and it takes a great deal of field work to accumulate information. I would like to express my appreciation to the many T.O.S. members with whom I have been associated in this field work and for whom lack of space prevents personal listing.

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# MIGRATION DATA FROM TELEVISION TOWER CASUALTIES AT NASHVILLE

### By AMELIA R. LASKEY

In autumn 1961, the first casualty found at WSIX television tower was a Yellow-breasted Chat on the morning of Sept. 13. As in previous years, a daily search under towers and cables was made, with the excellent cooperation of Clara W. Fentress, until the morning of Nov. 8 when migration appeared to have ended. A total of 228 birds of 52 species was collected from Sept. 13 to Nov. 7 at WSIX. One collection at WSM television tower on the morning of Oct. 3 by H. E. Parmer, which we examined together, yielded 183 birds of 27 species. The combined totals are 411 birds of 58 species.

There were few periods of unfavorable weather during the 1961 autumn migration period. There was one nine-day period (Sept. 19 to 28) when no casualties were found.

The heaviest disasters occurred on the nights of Oct. 2-3 (59 at WSIX; 183 at WSM) and Oct. 13-14 (46 at WSIX; no visit to WSM). The Oct. 2-3 kill followed a day of overcast skies, low ceiling, north wind, evening rainfall and a passage of a cold front in the night (mean temperature 56, normal 68). The following morning, Oct. 4, north winds prevailed with mean temperature below normal. A heavy migration must have continued, as we gathered 25 dead birds that bright morning. The next few days were free of casualties, then only a minimum until the night of Oct. 13-14 when another cold front, north wind and some very light precipitation resulted in 46 casualties at WSIX. The number dwindled on Oct. 15 to 5 birds. After that the daily collections dwindled to 0 to 6 to the end of migration.

The casualty list, as usual, added some new extremes to our Nashville area records; new early arrival, Fox Sparrow Oct. 14: new late departure dates, Sora Nov. 5; Yellow-bellied Flycatcher Oct. 14; Worm-eating Warbler Oct. 3.

Other late departures noted (not extremes) were: White-eyed Vireo, Oct. 14; Tennessee Warbler, Nov. 6; Orange-crowned Warbler, Nov. 5; Parula, Mourning, Wilson's, Canada Warblers, and Bobolink (2), Oct. 3; Grasshopper Sparrow, Oct. 27.

Several pertinent records were obscured because the birds fell on roofs, thus collections were unavoidably delayed and exact date of passage undeterminable. The following birds were among them in late October: Yellow, Black-throated Blue Warblers, Yellow-breasted Chat, Baltimore Oriole and Scarlet Tanager.

Migratory dates for our permanent resident species, such as the Field Sparrow, are not easy to determine, but this year as in previous years Field Sparrow casualties indicate there is a peak of arrivals of this species from the north in the first week of November.

The complete list of casualties collected for 1961 follows with an asterisk (*) preceding those from WSM: American Bittern, 1; Sora, 3; American Coot, 2; Mourning Dove, 1; Yellow-billed Cuckoo, 3; Chimney Swift, 1; Yellow-bellied Flycatcher, 1; Red-breasted Nuthatch, 1; Brown Creeper, 1; Catbird 8, *6; Wood Thrush 3, *2; Hermit Thrush 2; Swainson's Thrush 4, *7; Gray-cheeked Thrush, 2; Veery, 1; Golden-crowned Kinglet, 10; Ruby-crowned Kinglet, 4; White-eyed Vireo, 2; Red-eyed Vireo 6, *23; Philadelphia Vireo 1, *6; Black-and-white Warbler 3, *10; Worm-eating

Warbler, *1; Tennessee Warbler 25, *24; Orange-crowned Warbler, 1; Nashville Warbler 1, *1; Parula Warbler, *1; Yellow Warbler, 1; Magnolia Warbler, 13, *15; Black-throated Blue Warbler, 1; Myrtle Warbler, 3; Black-throated Green Warbler, 7, *3; Blackburnian Warbler, 1, *2; Yellow-throated Warbler, 1; Chestnut-sided Warbler, 7, *11; Bay-breasted Warbler, 13, *5; Palm Warbler, 4, *2; Ovenbird, 38, *40; Northern Waterthrush, 1, *5; Kentucky Warbler, *1; Mourning Warbler, *1; Yellowthroat, 9, *7; Yellow-breasted Chat, 3; Wilson's Warbler, *1; Canada Warbler, *1; American Redstart, 2, *3; Bobolink, 1, *1; Baltimore Oriole, 1; Scarlet Tanager, 1, *2; Rose-breasted Grosbeak, 1; Indigo Bunting, 10, *2; Savannah Sparrow, 2; Grasshopper Sparrow, 1; Chipping Sparrow, 2; Field Sparrow, 3; White-throated Sparrow, 2; Fox Sparrow, 1; Lincoln's Sparrow, 1; Swamp Sparrow, 2.

An attempt has been made each year to utilize this material that would have otherwise gone to waste. Many of the birds are preserved (under my U. S. Fish and Wildlife Service collecting permit) for studies of fall plumages. Among them is a Tennessee Warbler in a typical plumage (verified by Dr. John W. Aldrich, U. S. Nat. Mus.). The throat of this bird is yellow but across the breast is a band 16 mm. wide of a dark color similar to the crown in fall, a grayish olive-green.

This year, 175 specimens were placed in individual plastic bags, sealed, labeled, frozen then packed in dry ice and sent in an insulated container by air freight to the University of Nebraska for a study of feather parasites. The remaining birds (unless in bad condition during warm weather) are frozen and rationed to the aged Red-tailed Hawk, and Great Horned Owls in captivity at my home since injured, 14, 10 and 17 years ago, respectively.

1521 Graybar Lane, Nashville 12, Tenn.

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# FURTHER OBSERVATIONS AT BUSH LAKE

### By HENRY E. PARMER

This report covers the period from May 14, 1960 to May 12, 1961 (MIGRANTS **29**:52-54, 1958; **30**:33-34, 1959 and **31**:67-70, 1960.) Dec. was -8 and Jan. -7, degrees colder than normal, giving us our coldest winter in 20 years. Cold weather killed greens in the fields, leaving almost no cover for sparrows. The lake was kept at a high level all year, so that it was not very attractive to shore birds. Records were kept for 182 trips, these usually being less than 30 minutes and the writer seldom left his car. 97 species were seen on the farm during the period. 7 X 35 binoculars were used.

Common Loon: Nov. 7 (1) to Nov. 25 (3) to Nov. 28 (2), then Apr. 3 (1) and May 9 (1). Horned Grebe: Dec. 12 (1), from Mar. 1 (2) to Mar. 23 (3). Pied-billed Grebe: Aug. 2 (1), a new early record for Nashville. Sept. 10 (5) to Sept. 28 (12). Oct. 3 to 4, last Nov. 9 (1). Mar. 13 (1), Apr. 16 (4), then May 3 and 12 (1). Double-cr. Cormorant: May 8 and 11 (1). Common Egret: June 1, Aug. 25, Oct. 10, and Apr. 13 (1). Black-crowned Night Heron: Only a few in May. Yellow-crowned Night Heron: One flying over on May 8. Canada Goose: Oct. 3 to 7 (22). Blue Goose: An immature bird from Oct. 22 to Dec. 8. Mallard: A female Aug. 2 through Aug. 17. This bird is believed to have nested in nearby Buena Vista marsh as one did the spring a year ago. Then 2 in Oct. and up to 14 in Nov. to 25 in Dec. up to 16 in Jan. The last were Feb. 28 (6). Black Duck: May 17 and 19 (3).

Then Nov. 3 and 28 (1), Dec. 21 (18), then none until Feb. 9 (58) to Feb. 28 (46). The lake is not a good feeding place for puddle ducks. Gadwall: Nov. 5 (1), then up to 6 on Jan. 4, then down to the last, Feb. 14 (2). Pintail: Nov. 30 (5) down to Dec. 26 (1). The last were Feb. 10 (3). Green-winged Teal: Oct. 4 (2), Nov. 7 and 20 (1), then Mar. 17 (2). Blue-winged Teal: Sept. 10 (11) and Oct. 3 (36). Then Mar. 13 (1) to Mar. 25 (20). These were up to Apr. 9 (50), and down to May 1 (5). American Widgeon: From Nov. 7 (5) to Apr. 14 (6). A peak of (11) in Jan., Feb. (16) and Mar. (4). Shoveler: Oct. 21 (3) then Nov. 10 (1) to Dec. 8 through 20 (3). Then Feb. 28 (1) until Mar. 29 and 31 (2). Apr. peak (24 on 11, down to the last on May 1, 14). Redhead: Oct. 21 (1) to (3) during Nov. and Dec. Then Jan 4 (2) and Jan. 6 (1), then (1) during Feb., to Feb. 28 (46). That is a lot of Redheads for Nashville. Ring-necked Duck: Oct. 27 (4), Nov. 5 (67), and down through Dec. to around (40). Then up to (80) during Jan. From early Feb. (20) to Feb. 28 (85). From Mar. 1 (135) to Mar. 20 (13). Then from Apr. 4 (55) to the last Apr. 19 (2). Canvasback: Nov. 7 (4) to Nov. 28 (6). Dec. 3 (19) to Dec. 27 (32). Jan. 4 (20) to a peak on Jan. 18 (35). Feb. ran from (19) on the 9 to Feb. 28 (1). Then Mar. 2 (6) to Mar. 14 (1). Greater Scaup: This rare duck wintered here. Dec. 27 (8), then Jan. 4 (5) to a peak on Jan. 9 (18). Feb. 16 and 28 (2). Mar. had from (4) to a peak of (9) on the 10, to the last on Mar. 29 (4). (The lake was frozen solid from Jan. 23 to 95% covered Feb. 6). Lesser Scaup: May 16 to 19 (3), then June 15 and 16 (8). This is a most unusual record. They had bright white face-patches, so must have been non-breeding females. Nov. 10 (15) was the only fall record. Unusual, as this is a very common duck here Jan. 9 (1), then none until Mar. 2 (4). The peak for Mar. (28) on the 24. Apr. 3 (86) was the largest, then down to the last May 3 (8). Goldeneye: Nov. 30 (1) and Dec. 20 (1). A peak Jan. 4 (12). Feb. (2) to (12) on 16. Mar. had up to (8) on the 8, and the last Mar. 20 (5). Bufflehead: None in fall. Mar 22 (5) down to Apr. 6 (2). Oldsquaw: Usually a rare duck here, Dec. 27 (3). Jan. 4, 6, 9 and 11 (6). None in Feb. Mar. 1 (6) to a peak Mar. 25 (12). Then down on Apr. 11 (4). Surf Scoter: Our first record since the 1930's. (MIGRANT: **32**, 17, 1961). Oct. 31 (1), Nov. 1 (1) and Nov. 10 (1). Ruddy Duck: Nov. 10 (1) to Dec. 4 (4), then none until Mar. 1 (1). Then a peak on Mar. 27 (22). A few in Apr. until Apr. 20 (24). This is a lot of Ruddy for Nashville. May 3 (3) and the last May 8 (1). Hooded Merganser: A very late female on May 30, then Feb. 16 (1) and Apr. 18 (1). Common Merganser: Feb. 28 (7). Red-breasted Merganser: Nov. 14 (2), Dec. 8 (8), then Mar. 23 and May 11 (1). Red-tailed Hawk: A few winter records. On Dec. 3, a Krider's subspecies was seen. Red-shouldered Hawk: An immature bird wintered in the area. Marsh Hawk: Aug. 22 (1), an unusual record. Bobwhite: Apparently a pair raised two successful broods on the farm. American Coot: Oct. 20 (7), then until Jan. 6 (4), Mar. 8 (2) to a peak Apr. 10 (45), then down to May 12 (4). Semi-palmated Plover: Sept. 17 (1), then Apr. 26 (1) and May 8 (4). American Golden Plover: Sept. 14 and 15 (2), Sept. 17 and 19 (13), then Sept. 28 (1). Black-bellied Plover: Sept. 17 (1). This bird was still in almost complete breeding plumage. Common Snipe: Sept. 10 and 17 (1), Oct. 21 (2) and Nov. 9 (1). Spotted Sandpiper: July 22 (2) to (5) until Oct. 24 (1). The first of spring was a single Apr. 13. Solitary Sandpiper: May 12 (1). Lesser Yellowlegs: Sept. 10 (2) and May 12 (1). Knot: This is an accidental and our first middle Tennessee record. It was collected on Sept. 20 and is in the collection of

Albert Ganier. (THE MIGRANT **32**:19, 1961). Buff-breasted Sandpiper: Sept. 11 (2). Sanderling: Aug. 22 (3) and Sept. 13 (1) Herring Gull: Oct. 3 (1), then none until a single Nov. 25. This built up to a peak Dec. 27 (30). Again a peak Jan. 6, (30) and down Jan. 23 (1). Feb. had only (1) from 10 to 23. Then Mar. 17 (6), a few in Apr., and the last immatures May 1 (12). Ring-billed Gull: Oct. 21 (5), then Nov. 21 (2). This built up rapidly to Dec. 8 (158) and continued to another peak on Dec. 26 (420). Then down Jan. 6 (80) and Jan. 23 (1). Then Feb. 23 (1) and Feb. 28 (110). A few through Mar. with a peak Mar. 22 (39). The last Apr. 13 (3). Franklin's Gull: Dec. 20 (1). This is a remarkable record. The bird was observed on the ground at 100 feet through 7 X 35 binoculars for 20 minutes. It was a bitter cold day with a high wind and it did not fly. The author feels that the record is as positive as a sight record under these conditions can be. Bonaparte's Gull: Apr. 3, 11, 13 and 18 (1). Forster's Tern: June 24 (2), Apr. 21 (5) and Apr. 25 (1), then May 1 (18). Common Tern: July 27 (3). Caspian Tern: Very rare here. Sept. 11 (3) and 17 (1). Sept. 14 a banded bird was found floating in the lake that had been killed by a dove hunter. It had been banded in July as a nestling in upper Lake Michigan. Black Tern: May 16 (5) and 17 (10). June 23 (1) already in fall plumage, and June 25 (1). Then Aug. 9 (1) and Sept. 9 (5). The last of the fall Sept. 17 (2). Eastern Kingbird: A pair nested and spent the summer. Tree Swallow: Aug. 29 (3), then Oct. 20 (10), then Mar. 29 (12), Apr. 17 (3), and the last, May 8 (2). Bank Swallow: July 28 (5), then from Aug. 29 to Sept. 17 (1). Next spring they were late with May 8 (60). Barn Swallow: Oct. 20 (4), were the last of fall. Then Mar. 23 (12) and up to Apr. 13 (50). They nest there. Purple Martin: Mar. 14 (1), a new early record for Nashville. Up to Apr. 13 (50). About 13 pairs nest near the lake. Water Pipet: Oct. 31 (45) and Nov. 1 (150). A few all winter. Myrtle Warbler: Oct. 5 (20). All winter along the river. Bobolink: Apr. 27 (3) were early. A peak May 1 (18) and the last May 3 (3).

Birds seen on the farm, but not listed above: Great Blue Heron, Green Heron, Sparrow Hawk, Killdeer, Mourning Dove, Yellow and Black-billed Cuckoo, Chimney Swift, Belted Kingfisher, Yellow-shafted Flicker, Eastern Phoebe, Horned Lark, Rough-winged Swallow (nest), Blue Jay, Mockingbird, Brown Thrasher, Starling, Loggerhead Shrike, Palm Warbler, House Sparrow, Eastern Meadowlark, Redwinged Blackbird, Grackle, Cardinal, Savannah and Vesper Sparrows, Slate-colored Junco, Field and Song Sparrows.

3800 Richland Ave., Nashville 5.

# IN MEMORIAM — DR. JESSE M. SHAVER

## By HARRY C. MONK

Dr. Jesse Milton Shaver, an Honorary Life Member of the Tennessee Ornithological Society, died in Nashville July 7, 1961. He was born in Gerber, Walker county, Georgia, on November 29, 1888. He graduated from the University of Tennessee at Knoxville, in 1915; later the Masters degree was obtained at Vanderbilt, and the Ph. D. from the University of Chicago. In September, 1915, he was married to Miss Daisy Rule, of Concord, Tenn. Dr. and Mrs. Shaver reared six children, two boys and four girls; all married and there are 13 grandchildren.

Dr. Shaver achieved success in several endeavors. He taught biology at Peabody College for 39 years, being head of the department 26 years. He edited the Journal of the Tennessee Academy of Science over 25 years, publishing more than 8,700 pages in this period. He made a detailed and extensive study of "The Ferns of Tennessee" which became a volume of over 500 pages. In this space we wish to record his membership in our society, and his studies of birds.

He became a member of our society on Oct. 20, 1916, and took an active part in its work for many years. Moreover, he encouraged students and faculty of his department to do the same. He was elected Vice-President on Nov. 12, 1926, and President on Feb. 4, 1927, serving until Oct. 15, 1928.

Dr. Shaver's first bird publication was the Christmas census made Dec. 24, 1921. In a span of 22 years he took part in 16 Christmas counts, including four made in Montgomery Bell State Park, which he planned and led. He was strongly attracted to ecology, and his doctoral dissertation was in this field. Much study in this subject was carried on at Peabody's Knapp farm property, and on the campus. A series of papers on birds' relation to their environment, and on life history was published in The Auk, 1930, The Wilson Bulletin, 1931, and in the Journal of the Tennessee Academy of Science, 1931 - 1936. National recognition came as a result of his studies, and the American Ornithologists Union elected Dr. Shaver to the restricted class of "Members" in 1932; he was the first Tennessean so honored. In "Bird Study at Peabody College" (The Migrant **6** (4) 80-82, 1935) he gave a list of 19 theses in ornithology which his students had completed up to that time.

Dr. Shaver was elected Secretary of the Wilson Ornithological Club on Dec. 1, 1928, serving three years, and was elected their President Dec. 28, 1931, again serving three years. He has been described as being "for many years a bulwark of the Wilson Ornithological Society" (The Wilson Bulletin 73 (3) 282, 1961).

His last bird publication was "Bird Notes from a Sick Room" (The Migrant **10** (4) 80-82, 1939). In two paragraphs on page 80 the food and feeding habits of Blue Jays are described; these are typical of his detailed observations of birds, and of his care in recording such data. He contributed some notes to a symposium on "The Wrens of Tennessee" (The Migrant **13** (1) 1-13, 1942), and took part in the Christmas Count that year. Further publications were in botany, tho he never lost his interest in birds.

A number of biographical and memorial notices, some with portraits, have appeared in the publications of the organizations to which he belonged, especially the Journal of the Tennessee Academy of Science. A snapshot reproduced on page 58 of the September, 1935 issue of The Migrant is really a good character study, showing the companion with whom we shared so many field trips.

Dr. Shaver was an unusually tall man, standing six feet six inches in height; by contrast his voice was soft and low, the very expression of a gentle nature. He was invariably courteous, friendly and sympathetic to everyone, and he possessed a delightful sense of humor. He was a man of unquestioned integrity. Every human being possesses some desirable traits; in Dr. Shaver a considerable number of such traits were happily blended to produce a fine and effective individual.

406 Avoca Street, Nashville 5, Tennessee.

# THE SEASON

MEMPHIS.—Few reports have been received and the writer's own season was "snake-bit." The 4-day Thanksgiving trip, the 3-day New Year's trip, and several week-end or Sunday trips were called off. Bad weather gave poor results at other times. The Moon Lake Count was called off while the Grenada, Miss. Count, Dec. 31, was stopped, then abandoned since there was no hope of a representative list, in a downpour. Among fall transients at Lonoke, Ark., Oct. 14, was a Piping Plover (rare), Dunlin 20, and Dowitcher 60 (some Short-billed heard). Other Dowitchers: 6 Short-billed, Oct. 7, E of Weiner, Ark. and 2 (sp ?), Sept. 30, NE of Marion, Ark.; at the latter pond also, 3 Semipalmated Plover, Sept. 30, and 3 Dunlin, Oct. 14. Late stragglers were: American Bittern to Nov. 18; a Pectoral Sandpiper, Nov. 18; 3 Semipalmated Sandpiper, Dec. 2, all near Booker; and 3 Greater Yellowlegs, Dec. 23, SE of Lonoke. Two single Booming Nighthawks over town, evening of Oct. 25 (Alice Smith) were our latest by a week while a Barn Swallow at the Miss.-Tenn. line, Lakeview levee, Nov. 19, was our latest by almost a month. Tree Swallows not as late as usual — small flocks, Nov. 4, Booker.

A Catbird was seen, Jan 28, at Grenada (AS, BC, LC), a House Wren, Dec. 3, near Jonesboro, Ark., an Orange-crowned Warbler at Grenada, Dec. 31 (BC), and a Dickcissel in her Memphis yard, Feb. 22, (Mrs. Bernice Johnson).

The rarer visitants were not found. Brewer's Blackbirds were at the Penal Farm, Nov. 11 (total 33) but uncommon singles, other dates. The Lapland Longspurs were singles or few except George Peyton, Jr., found about 500 at the Penal Farm, Dec. 24, and I found about 900, Dec. 30, near US 61 and just S of the Tunica-DeSoto County line, Miss.; no repeats on the flocks. Dec. 3, we had at least 12 Smith's Longspurs on the Jonesboro airport and on Jan. 28 (LC, AS, BC) 8 were found on the Grenada airport. None found at the Penal Farm nor on airfields near Walls and Clarksdale, Miss. This looked like a Red-breasted Nuthatch year when we totaled 21, two areas of Chickasaw S.P., Tenn. on a poor Nov. 26 (BC, LC, AS) but the bitter weather of early January must have moved them out. None was found in pines along Tenn. 57 highway, Saulsbury east, including the Ben Carr pines, Feb. 4; finally 2 that day near YMCA Camp, S of Pickwick (Dinkelspiels, John Morrow, BC). Four at Natchez Trace S.P., Dec. 10 (BC, LC) but stormy and late; one at Grenada, Dec. 31 and 4 there, Jan. 28. Casuals (non-pine areas) were: 4, Shelby Forest S.P., Oct. 8, (TOS); Stuttgart, Ark., Oct. 14-15; Lonoke, 1 (BC), Dec. 23; Memphis singles, Count period (Earl Fuller) and Feb. 2 (Oliver Irwin). Pine Siskins were in Overton Park, 2 to 10 being found, from Dec. 2 (BC, B. F. McCamey, Jr., Helen D.). In West Tennessee, 3 at Ames Plantation, Nov. 12 (TOS); 6, Lake Placid, Chickasaw S.P., Nov. 26; and 1, Natchez Trace S.P., Dec. 10.

At Booker, Ark., Mar. 11, we found 135 Golden Plovers (none earlier at Penal Farm or Lakeview); 450 Blue Geese, a few Canada and Snow Geese, and many ducks. NE of Marion, same date, one Greater Yellowlegs.

BEN B. COFFEY, JR.

NASHVILLE.—Several species were recorded in the Nashville area earlier than usual during the fall of 1961. A Pintail and three Widgeon on Bush lake on 9-28 (Henry E. Parmer) were considerably early. Also in this category can be included a Loon on 10-14 at Bush lake (HEP); a Long-billed Marsh Wren on 9-14 at Ashland City marsh (John C. Ogden); a Black-throated Blue Warbler on 9-23 (George R. Mayfield, Jr.); one Rusty Blackbird on 10-27 (HEP); and a Rose-breasted Grosbeak at Mrs. William Bell's home on 9-1.

Three species of empidonix flycatchers which are not usually reported here in the fall (Yellow-bellied, Traill's, and Least) were all banded on 9-23 by Mrs. Katherine A. Goodpasture on WSM-TV hill. Other fall varieties were: Golden Plover, one on 10-3 and another on 11-4 at Bush Lake (HEP); three Dunlin on 11-3 at Coleman's lake (Lawrence O. Trabue); three Dowitchers on 9-23 at the same lake (LOT); Sanderlings, 5 on 10-21 at the same lake (LOT) and one on 11-6 at Bush lake (HEP); one Mourning Warbler on 10-3 picked up dead at WSM-TV tower (HEP); and a Lincoln's Sparrow, also dead at WSIX-TV tower on 10-26 (ARL).

There were numerous late records for the fall. They included a Common Egret on 11-16 at Bush lake (HEP); Broad-winged Hawk on 10-7 at Basin Spring (KAG); a new late date for Spotted Sandpiper was one which remained until 11-26 at Bush Lake (HEP); a Catbird on 11-18 (Clara W. Fentress); and a Wood Thrush on 10-22 (Harry C. Monk). Four species of warblers were reported later than usual; Prothonatary, 8 on 9-23 (TOS); one Golden-winged on 10-7 (CWF); and a Blue-winged on 9-28 (Mrs. WFB).

This winter Robins, Grackles, Blackbirds and Cowbirds were very scarce until they began to return in February. There was no large roost in the area. Probably related to the movement of these species farther south than usual was the increased number of records in this area of more northerly wintering species. Common Merganser were considerably more numerous, the largest flock being a group of approximately 100 birds on 2-17 at Old Hickory lake (TOS). Red-breasted Nuthatches were recorded more often, the first being one on 9-16 (HCM). The apparent first Davidson County record for an Evening Grosbeak was one on 1-4 by Jesse Wills. This species was also recorded just across the County line in Williamson County when two were seen on 11-17 by E. G. Tompkins on Union Bridge road. Another species in this group was the Pine Siskin which was seen on 10-28 & 29 at Basin Spring (KAG). Purple Finches were also more numerous.

Other interesting wintering species were a Blue Goose on Bush lake from 11-8 throughout the rest of the winter (HEP); Greater Scaup reported irregularly from 11-29 to 1-31 at Bush (HEP); and Bonaparte's Gulls on Old Hickory lake only for the second winter.

The beginning of spring migration was highlighted by an Oldsquaw male in a flooded field at Buena Vista bottoms on 3-9 and 10 (HEP-HCM) and an early Purple Martin on 3-13 at Coleman's lake (LOT).

JOHN C. OGDEN, 2813 White Oak Drive, Nashville, 12.

LEBANON.—As of March 15, 18,000 ducks are feeding on Lock 5 Refuge, Old Hickory Lake. This is by far the largest number ever found on the refuge at this time of year—this despite the fact that the duck population was less than 75 per cent of normal during the hunting season.

With the plethora of ducks, there is dearth of Coots. Less than 100 are now on the refuge.

Farmers who share-crop the refuge feeding ground to corn were unable to gather the crop last fall, due to high water. Thus the refuge got the benefit of the entire crop instead of the one-half that normally would have been left. There is still plenty of feed on the range and this has brought in ducks from other feeding grounds of the area. However, by the time the ducks leave—usually early in April—there will have been almost complete utilization of the corn crop.

The chapter has been almost in a state of suspended animation through the winter. Death or desperate illness or both came to the family of nearly every active member of the chapter during the past few months. We expect to resume normal activity with the April meeting.

DIXON MERRITT, Route 6.

COOKEVILLE.—The Upper-Cumberland Chapter has experienced the usual and the unusual for the season—the unusual (Jan. and Feb.) twice the usual quota of rain. Snows have been numerous, but only two worthy of note: 1) one week of it early in the year (1962) with 4 inches on the ground and a night or two at zero levels; 2) a day or two of icy roads and an inch of snow as March came in. Thus far in March, there's more of the "usual" for the month.

Bird-life reports have centered around feeders since the Christmas count. The usual run of Titmice, Purple Finches, Chickadees, Sparrows, and Cardinals, with an occasional invasion by a Mockingbird, and many invasions by Starlings and Grackles are prominent in our notes. The suet pieces have attracted Downys as usual, and, near wooded areas, some Red-bellies (S. & M. McG.). In addition, during the colder days in January, a Ruby-crowned Kinglet made a daily visit (PLH).

Robins were almost out of the picture until a few strays appeared in town on and after Feb. 12. By the end of the month these were seen in flocks of several hundreds (CH. Dr. J. M.). Some thirty developed rather unusual roosting habits about the same time. Almost in the heart of the residential area Dr. Morehead found them several nights in an evergreen tree growing against the side of the house.

Our count (Xmas) showed hundreds of Starlings **in town,** but not so many outside where the Grackles were so numerous feeding on waste in grain fields. This ratio, noticed in previous years too, is now being reversed—fewer Starlings in town and more Grackles. (Apparently thousands of both species have been roosting in pine thickets five miles north of Cookeville during the hardest part of the winter. See Migrant's Season of last year.)

Doves appearing sparingly to most of us, have fed steadily as many as 30 at a time in the yards of two of our group (McG. and Dr. C. Bruce). There are now indications that these and the Cardinals are looking for nesting sites at this writing.

The often-looked-for-but-rarely-found Pied-billed Grebe, ie, in bird-count days, was seen in numbers close to a hundred several times (M. W.) in the locally famous "Booger Swamp". Local flooding, beyond the usual area of the swamp, seems to have been very inviting to these usually rare in our vicinity. Another, still unusual hereabout, the gulls, gave us a surprise (PLH) when one flew over Tech campus on Feb. 28 at the 200-foot level. Without preparations for such an observation of 10 seconds, the best guess is a Ring-billed Gull.

P. L. HOLLISTER, Biol. Tenn. Tech.

CHATTANOOGA.—Following the rumors came the birds. Beginning on January 4, with a report of a flock of 20 Evening Grosbeaks in the woods of Chickamauga Park, we have had almost continuous reports from nearby Signal Mountain of the presence of this welcome wanderer. The Grosbeak has appeared regularly at the home of Mr. & Mrs. Clarence Prestridge with as many as 40 counted at one time. Their latest record was February 26, the day Benton Basham dropped in and banded four members of that species. Other than the Chickamauga flock, Jim Tucker's report of the Grosbeak at Collegedale, Tenn., was the only valley record.

Mrs. Adele West and Miss Gladys Conner had a stroke of good fortune which brought another first for Chattanooga—the Rough-legged Hawk. The Moccasin Bend area where they identified this rare bird under excellent conditions, is a fairly level open peninsula of land nearly isolated from civilization by the meanders of the Tennessee River. It seems to be a good spot for soaring birds—the Golden Eagle sighted over the Bend three years ago is just one example—and fortunately part of this land is slated to be preserved as another of the Chattanooga area's new public recreation parks.

Last year, on the basis of correspondence with a Tennessee Game and Fish Commission biologist, the Woodcock was established in the local counties as a migrating species. But that was before the Woodcock took up residence with the Nat Halversons at McDonald, Tenn. Starting in November, his reports show this species to be a wintering bird in Hamilton County.

Some dates worth noting: a late fall record by Gene and Adele West on the Dunlin, 12-3, reported from the new Hamilton County Park on Chickamauga Lake; a very late Catbird, 11-26, turned in by Ralph Bullard; and on two club field trips to Chickamauga Lake on March 10-11, the Shoveler was seen both days (an early record) and the Blue-winged Teal seen on 3-11 tied our earliest previous Spring arrival date. The two trips in two days incidentally were a little experiment by Field Trip Chairman Benton Basham in having a competition between groups. Nearly 70 species were totalled in the two days.

Although outside our Chapter study circle, a February 2 field trip to Woods Reservoir Refuge near Tullahoma produced the Oldsquaw for the second winter in a row.

Twice since the first of the year, the Bald Eagle has been seen on Chickamauga Lake in the vicinity of Chattanooga. The dates were 1-13 and 3-10.

ROCK L. COMSTOCK, JR.

KNOXVILLE.—Red-breasted Nuthatches were unusually common in this area during the fall season. Their numbers decreased noticeably in late November, but some individuals remained all winter. In January there was a short spell of very cold weather, which was followed in February by some weeks which were much warmer than average. Purple Finches were present all winter in moderate numbers. Several Brown Thrashers remained in scattered locations. A large roost of Starlings formed west of Knoxville near Rocky Hill School at the same location as last year, and with them were about 1,500 Redwings and a small number of Rusty Blackbirds as well as some Grackles.

The most unusual birds in this area were Evening Grosbeaks, which appeared at Gatlinburg, Maryville and Knoxville. From January 27 to February 2 a few of these birds were reported from various spots around Knoxville, and on March 5 a small flock was seen on the city's edge. A flock of 100 birds has been present in Maryville through the first week in March.

Woodcock have been seen and heard performing from February 3 through March 7 in numbers and places not known in previous years. Up to five individuals have been present between these dates in the vicinity of the Kenneth Sanders home, and others have been performing around Mary Enloe's home.

On February 13 a Pigeon Hawk was seen in Knox County by John Ogden; this is a rare migrant here.

The warm weather in February stimulated early song and signs of nesting activity in Doves, Starlings, and Carolina Wrens. A Mourning Dove built a nest in a tree on the University campus and was observed incubating first on February 13, a very early date. Incubation continued through many warm but rainy days through March 1, when the weather turned colder. On the 2nd the nest was empty except for two eggs, but both adults were seen in the vicinity of the nest. No more activity was observed until March 7 when they were again incubating in the same nest; at this writing there is no way to know whether they are on the same eggs or whether others have been laid.

JAMES T. TANNER.

GREENEVILLE.—The season from October to March has been very dull. During the fall there was very little rain and therefore no puddles for shore birds. Despite the almost twelve inches of rain during January and February ducks have been very scarce. There has been a noticeable increase in the number of Bluebirds this year; in October five were seen together, in November ten in one day, two and three were seen and heard through December and January, in February from six to eight were seen almost every day, in March it appears that we will have three or four pairs nesting this year.

During the winter Dr. Spees was in possession of a Great Horned Owl which was taken to a locality known to be inhabited by Horned Owls and turned loose in a barn. The owl left the barn the second day and was joined by two of the local owls about one hour before dark, they all hooted for about two hours the first night. The two local owls returned to the vicinity of the barn for two more nights to hoot to the stranger, then all three left to return to a nearby woods. They could still be heard on March 14 but we have not located a nest.

There have been unusual numbers of White-breasted Nuthatches this winter; Red-breasted Nuthatches have also been present all winter; a large flock of Cedar Waxwings was seen several times during the winter whereas only a few Purple Finches were seen all winter. A few Robins have been seen all winter but not until January 14 in any large numbers. Evening Grosbeaks were not seen until late in February.

RICHARD NEVIUS, Greeneville.

KINGSPORT.—If like the Chinese we recorded years by names instead of numbers the winter of '61 - '62 would be called the year of the nuthatches. All of our members have commented on our frequent observations of nuthatches. I have seen two White-breasted together at my feeders every week and almost every day. The Arthur Smiths have seen Red-breasted throughout the winter. Also the Smiths have seen Bluebirds all winter. White-crowned Sparrows have been very scarce. Otherwise, our observations are without pattern and full of surprises.

As in 1960 September was very dry; October, dry and warm. Again, for the fourth fall, we failed to observe shore birds. On November 9 we had our first hard killing frost with a low of 26°. The next week on November 17 I saw Common Loon, Redheads, Ring-necked Ducks, Lesser Scaup and one Ruddy as well as the first Western Grebe seen in this area. Ed Gift reported a flock of 20 Red-breasted Nuthatches on Chimney Top the next day. November 22 I again saw Western Grebe as well as Horned and Pied-billed Grebe. The numbers of Great Blue Heron were low although we saw a few regularly.

Two species stayed unusually late on through the winter. Arthur and Elizabeth Smith have daily records of a Blue-gray Gnatcatcher until December 23 and on January 13 after three days of severe cold and 4 inches of snow I saw a Brown Thrasher. The Smiths observed a Thrasher February 26.

On January 25 Mrs. E. M. McMahon saw 12 Evening Grosbeaks at her feeder, the only record we have for this year. January 14 brought the first record of Red Crossbills for this area; the flock was seen on Bays Mountain by Arthur and Elizabeth Smith.

In February there were three unusual observations. On February 6 I saw the only flock of Pine Siskins reported during the year. They were on an open grassy slope above boxelders along a stream back of my house where I have seen them on one other occasion in recent years. The next day February 7 brought the most incongruous sight of the year. I was just sitting down to my breakfast and morning paper when I saw what appeared to be a chicken in a willow oak on the front lawn about 40 feet outside the window. Continuing observations forced me to conclude it was a partridge in an oak tree. It was in greyish-brown plummage puffed out in the 20° cold and looked ungainly and unlikely balancing on the twiggy branches. I called my near neighbor and got my field glasses. The Ruffed Grouse continued to eat the buds of the oak for a full five minutes before it flew off to the wooded ravine behind our house. On February 24, Thomas Finucane saw a Solitary Vireo on Bays Mountain at least two weeks ahead of previous first dates.

So far in March we have continued to see and hear Purple Finches which have been observed fairly regularly during the winter. On March 10 the Arthur Smiths saw Wood Ducks examining nesting boxes and holes. As yet no Purple Martins have been reported from owners of boxes. On March 11 the Smiths saw our final unexpected visitor, a Black-crowned Night Heron. They were walking along the bank of the Holston under the bluff opposite Tennessee Eastman. They had 8 and 10 power field glasses and clear light as well as several opportunities to observe the markings on the chunky bird at different angles at close range. It was feeding and flying along the river bank opposite them giving ample opportunity for observation. Although our records have not shown Black-crowned Night Heron for eight years and never so early we note that both the Peterson and Audubon guides mention their wintering even farther north than Tennessee.

ANN SWITZER, 1620 Fairidge Place.

ELIZABETHTON.—The fall was somewhat deficient in rainfall but part of it was made up during Dec., Jan. and Feb. which gave us 6.8", 4.55" and 4.47" respectively.

Mist netting and banding were carried on intensively during the fall migration season until mid-Nov. when the weather became too severe. Total individuals banded during the calendar year by all of our area cooperators was 3,074, only 70 individuals more than the 1960 bandings but ten more or 97 species were banded. Species of which more than 100 individuals were banded were: Catbird, 173; Swainson's Thrush, 123; Cardinal, 163; Indigo Bunting, 394; American Goldfinch, 184; Field Sparrow, 138; White-throated Sparrow, 209 and Song Sparrow, 416. The Myrtle Warbler was the only species in this list last year which did not make it this year. The Indigo Bunting yielded first place to the Song Sparrow this year.

As the weather became more severe waterfowl moved into the area in appreciable numbers, for an area which is out of the main fly way. The first real influx occurred about the end of the first week in Nov. Common Loon, 11-10 through the month and 1-14 (1); Horned Grebe, 11-19 all winter except the end of Jan. and first two weeks of Feb.; Pied-billed Grebe, 10-12 throughout winter; Double-crested Cormorant, 11-19 (rare); Great Blue Heron, all winter; Green Heron, 11-19 (Brownings); Black-crowned Night Heron, 2-23 (1) (Ed Davidson); Canada Goose, 11-19 (20); Mallards, Black Duck, Gadwall and American Widgeon were present all winter; Pintail, 3-10 (Kenneth Dubke); Green-winged Teal, 3-4 (1); Shoveler, 3-10 (6); Wood Duck, 2-17 (1); Redhead, Ring-necked, Lesser Scaup, Common Goldeneye and Bufflehead were present all winter reaching maximum numbers early in March. Canvasback, 1-21 and 3-10 (2); Oldsquaw, 2-24 (1) (Lee R. Herndon); Hooded Merganser, all winter; Common Merganser, 1-14 (2) and 3-4 (4); Red-breasted Merganser, 3-10 (2); Bald Eagle, 3-4 (1 Im.), South Holston Lake, 3-10 (1 adult) Watauga Lake (C. B. Malone by LRH); Marsh Hawk, 2-4 (1); American Woodcock, 2-11 (1) (KD), 3-12 (4) (LRH); Ring-billed Gull, 25 to 40 have wintered on Boone, South Holston and Watauga Lakes, each; White-breasted and Red-breasted Nuthatches were present all winter in greater numbers than usual; House Wren, 2-27 (1) (ED); Robins returned 2-28 (2); Hermit Thrush, 1-14 (2); Bluebirds slightly more numerous than in past few winters; Redwinged Blackbirds 2-24 (1) flocks after 3-1; Rusty Blackbirds after 2-25; Common Grackles 1-14 (20), 1-20 (5,000) (LRH), tremendous flocks thereafter; Brown-headed Cowbirds, present all winter; Evening Grosbeak, 11-9 (LRH), numerous reports of flocks up to 30 individuals; Purple Finch, present in small numbers from 10-1; Pine Siskin, 3-11 (10) (KD, LRH).

LEE R. HERNDON, Elizabethton.

## ROUND TABLE NOTES

EVENING GROSBEAK SEEN AT NASHVILLE.—On the morning of January 4, 1962, I had a surprise when I discovered an Evening Grosbeak on one of my feeders. This is a flat, open tray on a pole about fifteen feet behind my bath and bedroom windows. I make a habit of keeping an eye on it while dressing.

This particular morning when I glanced out there were three or four Starlings feeding, but also a fluffy, gray bird about the same size which I felt immediately was something unusual. It was silvery gray with black and white on its folded wings and tail. Its most distinctive feature, however, was a very heavy whitish bill, more massive even than that of a

Cardinal. This made me think at once of an Evening Grosbeak, but I was puzzled because I would have expected such a bird to be more yellow. When I studied it more carefully through glasses, however, I could detect some traces of yellow. It was either a female or an immature bird. It would stay on the feeder a minute to several minutes, leave, and then return for another short visit. This occurred over a period of from twenty minutes to half an hour. Twice it was in a tree as close to the window as the feeder was, where I had a good opportunity to observe it from another angle. It fed with Cardinals as well as Starlings, but never fed steadily. It seemed to be somewhat wary, and spent part of its time looking around. My wife and son both looked at it and compared it with the pictures and descriptions in Peterson and Pough.

I called Mrs. Goodpasture to report it. She told me that if it came back or showed any pattern of regularity in coming back to let her know. It has been a disappointment that I did not see it again after that morning, though before I left I replenished the tray with sunflower seed. I have had more Starlings than usual lately, and several times a day I am deluged with a large flock of Sparrows, so that the tray is hard to keep filled and is often too crowded for any shy strangers. I presume that this particular bird was a solitary stray which moved on somewhere else after that morning.

JESSE E. WILLS, National Building, Nashville 3.

EVENING GROSBEAKS AT WAYNESBORO.—In THE MIGRANT for Sept. 1960, I reported that Mrs. James L. Hardin had watched a flock of these birds at Waynesboro from early March into April, 1960. This point is 80 miles southwest of Nashville. She has again written me, under date of 11 January, 1962, that a flock of these birds were again observed by her there, first on 7 Jan. She comments: "They are all about in large numbers and feed in the trees up and down a small stream near the center of town. Their chief food seems to be seed hanging from the box elder trees. They are beautiful, large, showy birds, particularly the males with their vivid yellow markings." The flock remained only about a week, the last seen were 2 females on the public square, 13 Jan. The extremely cold and snowy weather of early January may bring in some further reports of this species.

ALBERT F. GANIER, Nashville 12.

THE FIRST RECORD OF STARLINGS IN THE KNOXVILLE AREA. —At the suggestion of Arthur Stupka, I am summarizing here my journal notes describing my collection of two Starlings *(Sturnus vulgaris)*, apparently the first time these birds had been seen in the Knoxville, Tennessee, area. The date was October 24, 1923.

I had left Mr. Jones's farm about 6:30 a. m. and walked toward Powell, starting down the pike and then turning off on a shortcut. When I reached the flat woods about a half mile from Powell, I met a flock of at least 5,000 Common Grackles which were moving southward. I noticed among them a speckled bird which did not have exactly the flight pattern of a Grackle. I shot at it, but instead of one, got two. When I picked up the first one, I thought it was a Starling, the first I had ever seen here; this identification was confirmed that afternoon by Harry P. Ijams.

The two Starling specimens were mounted by Mr. Arthur Ogden and presented to the University of Tennessee. They were lost when Morrill Hall burned several years later.

PAUL J. ADAMS, Crab Orchard, Tennessee.

LIMPKIN AT CORINTH, MISS.—On 2 May 1956, the late Elgin Wright, who shared my birding interest, and I were fishing at Waukomis Lake just east of Corinth. We were about 100 feet from a swampy area when three very strange marsh birds emerged from it. Unlike anything we had seen before, we studied their markings well. They then flew across the lake and perched in the top of a tall tree. There we left them. Returning home I found a fine article on the Limpkin, with a large illustration in color which corresponded exactly with what we had seen. About sunset the next evening I was in the same spot with another fishing companion, Joe Phillips, when from the swamp, some 50 feet from the shore, came a loud scream, an unearthly cry, described in my rough notes as "fighting wildcats". Then the bird arose and flew north rather slowly, giving me a splendid view of it.

I described this occurence in a letter to Ben Coffey at the time. He has suggested that in view of the finding of a Limpkin at Nashville, 10 and 11, June 1961 (THE MIGRANT 32 48-49, 1961) that the Corinth occurence be put on record. Likewise, to record his belief in the validity of the record.

BENJ. R. WARRINER, 407 Waldron St., Corinth, Miss.

GOLDEN EAGLE IN KNOX COUNTY.—The apparent first Knox County record of a Golden Eagle was made on 29 October, 1961 on a trip taken by Bill Gallagher and John Ogden to House Mountain in the northeastern part of the county. The adult eagle was seen by Gallagher and Ogden from near the top of the mountain as it was rising in a circular gliding manner on the air currents moving up the sides of the mountain. The first view of the bird was from above, then it circled slowly and climbed above the point of observation until it reached the top of the mountain where it turned and sailed off to the northwest in a straight flight and out of sight. The flat winged flight distinguished it as an eagle, and the very dark brown plumage combined with the golden brown feathers on the back of the head and white at the base of the tail distinguished the bird as a Golden Eagle were all easily seen.

JOHN C. OGDEN, 2813 White Oak Drive, Nashville, 12.

WHITE-FRONTED GEESE NEAR WAVERLY.—On the morning of February 17, 1962, a group of birders visited the Duck River section of the Tennessee Wildlife Refuge south of Waverly, Tenn. While routinely checking a group of Canada Geese with 20x scope, I came across a small flock of (6-8) White-fronted Geese *(Anser albifrons)*. Having studied hundreds of these birds on their Texas wintering grounds, I was acquainted with the various field marks, (pink bill, white face patch and other characteristic markings). All of the members of the group studied these birds and there was no doubt as to what they were.

At first, they were off to the side of the flock somewhat to themselves, but as we watched them, they swam in among the large flock of Canada Geese and we could see the difference in size very plainly. It was a very interesting and exciting find and we felt very pleased to have seen them.

THE MIGRANT lists only two previous records for the state.

JAMES A. TUCKER, General Delivery, Collegedale.

RUFFED GROUSE—House Mountain in northeast Knox County rises to an elevation of just over 2,100′ and stands about 1,150′ higher than the rolling terrain around it. Being the highest and most rugged area inside the county, and since a goodly portion of the east end is owned by a member of Knoxville T.O.S., Mr. J. T. Mengel, it has long been a favorite place to go in search of the more wild species. The mountain slopes gradually at the base with numerous freshets and a few year-round brooklets finding their way out of the dense tangle of buckeye, poplar and hickory, strangulated by an over-abundance of saw-briars and honeysuckle.

On one of these western slopes, in mid-afternoon, 30 September, 1961, while watching a Northern Waterthrush hunt food among the mosses of a tiny stream, I became aware that I was hearing a Ruffed Grouse drumming. Although it is considered a permanent resident of Knox County, only two records are shown in BIRDS OF KNOX COUNTY, (Dr. Joseph C. Howell - Muriel B. Monroe), one by Sumner Dow at Roaring Springs, January 1950, and a specimen brought to Dr. J. C. Howell by a hunter, November 1949. This record also came from Roaring Springs, in north Knox County, approximately 18 miles from House Mountain.

Successive week-end trips to the area during October revealed two "singing" males. Previous experience with this bird indicates to me that there may be several hens around. This, coupled with the excellent cover and abundant food supply should aid in the propagation of this species.

PAUL S. PARDUE, 1516 Cliffside Lane, Knoxville 14.

UNUSUAL PECTORAL SANDPIPER AT NASHVILLE—On 31 Oct. 1961 the author visited Bush Lake on a dark rainy day. On the floor of the newly drained small lake he found a Pectoral Sandpiper, and a few inches away a strange dark shorebird. It appeared so dark brown all over that it seemed almost black. He flushed the bird to get a look at the tail pattern and to see if there was a wing stripe. There was no white around the rump or the tail, and no wing stripe. Its size seemed exactly that of the Pectoral.

The following day both were found again, and in the bright sun it was still a strange bird. The eye stripe, head and bill were like the Pectoral. The throat and breast were dark brown and heavily streaked, the belly dark tan and streaked, the under tail covets dark tan, the legs green to gray. As we have no such bird he decided it should be collected. The next morning he and Mr. Albert Ganier found the bird once more. Mr. Ganier made a long and careful stalk, raised up, and—no bird. It was finally collected on another trip late that afternoon. In hand it appeared much the same. Not a sign of a break across the breast. However, the breast feathers appeared to be long and stringy, and not fully formed, and seemed to be wet.

A skin was made of the bird, then it was cleaned with carbon-tet. The under side proved to be white, and it gradually turned into a Pectoral Sandpiper. However, it is the melonistic phase, and a most unusual specimen. The bird must have waded into a puddle containing oil, gotten it on his underside, then picked up brown and black mud to stain the feathers. The oiled feathers had parted in many places, allowing very dark skin to show. These places seemed, at a distance, to be streaks. So the point of this observation is to show one of the many things that can give us strange plumaged birds that can not be identified afield.

HENRY E. PARMER, 3800 Richland Ave.

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## BOOK REVIEW

THE BIRD WATCHING QUIZ BOOK.—by Henry Hill Collins, Jr. Illustrated by Russell Francis Peterson. 116 pages, Harper and Brothers, Publishers, N. Y. $2.95.

A wide variety of quiz materials of grades ranging from the beginner through the professional ornithologist are covered in this small volume. Much of the material is thought provoking and designed to stimulate extensive reading to find the answers to specific questions. The quizzes are presented in a variety of forms and designed to sharpen ones identification of birds, by song, flight pattern, habitat, range, nest, eggs and a variety of means. The book can be used for games at home, while on trips in a car, for bird club programs as well as a variety of other occasions.

The more than 1,700 questions are divided into 74 sections with 70 bird drawings and range maps. It would be a valuable addition to any bird students library.

LEE R. HERNDON.

## REQUEST FOR INFORMATION—MIGRATION OF BUFFLEHEADS

A study of the Bufflehead is under way, and information on the migration of that species is needed. Data required include first arrival dates, peak date of migration and peak numbers, and departure dates. Only birds actually believed to be migrants should be listed, but, where pertinent, other data on wintering or summering numbers should be included. If only infrequent visits are made to areas frequented by Bufflehead, the statement "present by (date)" is preferable to "arrival (date)", and "last seen (date)" to "departure (date)". Information is solicited particularly for the spring migration of 1962, but it is hoped that interested observers will report any data they may have obtained in the past; requests for fall migration data will be made later. It is planned to colour-mark some Buffleheads in Maryland, New York, and Oregon during the winter of 1961-62, and observers should take particular note of any Buffleheads bearing bright patches of red, yellow, or orange. Please send information on the Bufflehead to:

A. J. ERSKINE, Canadian Wildlife Service, P. O. Box 180, Sackville, New Brunswick, Canada.

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# THE MIGRANT

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VOL. 33 JUNE 1962 NO. 2

# SOME NOTES ON WEATHER, PLUMAGE AND BEHAVIOR AS RELATED TO SHORE BIRDS DURING SUMMER MIGRATION

By JOHN OGDEN

Records of shore birds at Ashland City Marsh include a number of observations on plumage and behavior during their southward migration and some correlation of movement with weather changes which may be of general interest. These records were obtained during fifteen trips to the marsh between 16 July, 1961 and 15 September, 1961. The marsh is in the Cumberland River bottoms about two miles down river from Ashland City, Tennessee in Cheatham County. This generally shallow slough, with many exposed tree stumps scattered over the whole area, covers an area about 800 yards long and 100 yards wide at the extremes. The surrounding mud flats vary from ten to forty yards in width.

The numbers of shore birds was more impressive than during any previous year. The apparent reason for this change was the partial drainage of this area by conservation personnel to plant duck food. This created the extensive mud flats on three sides and an island and peninsulas down the middle of the slough which had not previously existed. During the entire period of observations the size of the slough continued to decrease at a slow but steady rate forming new mud flats and leaving older exposed areas to dry up.

## WEATHER

There appears to be some relationship between the movements of shore birds and the changes in weather. The accompanying chart will help to show this relationship. Cold fronts passed through on 15 July, and 6, 12, and 19 August. Censuses made on trips to this slough on days immediately following the passage of cold fronts showed significant increases over the censuses of the previous trips. Three of these post cold front trips resulted in 87, 151, and 84 percentage increases respectively in the numbers of individuals over the previous trips. A 24 percentage increase in the numbers of birds on 27 August over the previous count was the largest increase not preceded by a cold front. These post cold front peaks did not hold for long as there were 63, 27, and 29 percentage decreases respectively in the numbers of individuals on the first trips taken following such peak counts.

## PLUMAGE

During this period of trips to Ashland City Marsh interesting observations on the plumages of some of these shore birds were recorded. Species which show seasonal plumage changes appeared to be completely or largely in their breeding plumages during the mid July trips. By the last third of the month a few scattered individuals were in non-breeding plumage but the big increase of birds in this plumage came during early August. The appearance of a fair percentage of birds in immature plumage occurred

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during early August also. By 20 August all birds appeared to be in non-breeding or immature plumages.

In connection with these observations some notes on the Dowitchers and Stilt Sandpipers are of special interest.

The two Dowitchers seen on 16 July were in dissimilar breeding plumages. One of the birds had dark reddish-cinnamon underparts while the other was a uniform pale, pinkish-tan on its underparts. The Dowitcher seen on 7 August was a richer brown on the underparts with a greyish head and neck and only a pale tan wash across the upper breast. The rest of the underparts appeared white. This closely fits descriptions of the immature plumage of Dowitcher species. None of the Dowitchers was identified as to species, but the immature bird gave a mellow whistled note as it flew around over the slough which may be a clue to its identity.

The Stilt Sandpipers were in immature plumage. This is basically similar to the non-breeding plumage of the adults except that the back is a more strongly marked pattern of buffy, grey and black rather than uniform grey.

## BEHAVIOR

Pectoral Sandpipers displayed the most interesting behavior of an individual species. They showed both intraspecific and interspecific aggressiveness not displayed by any other species. In both situations not all Pectorals displayed this behavior nor did they display it on most days observations were made.

The interspecific behavior is exemplified by their attitude toward peeps, principally Least Sandpipers. Infrequently, while in a head-high, erect position, a Pectoral would make short runs at a peep and the peep would always retreat, usually by a short flight. Neither Pectorals nor peeps were heard to give calls during this action.

The intraspecific aggressiveness was much more frequent being particularly obvious on 17 and 23 August. On these days the flock of Pectorals was spread out over a large area feeding as usual. Several of the Pectorals seemed to have established small flexible feeding territories which they aggressively defended against other Pectorals. These territories could be considered as being portable due to the type of defense that was observed. These particular Pectorals would attack any other Pectorals which approached within three to seven feet of them even though the territorial birds seemed to move at random over large areas while feeding.

The usual procedure was for the territorial bird to stop feeding and stand erect when a second bird approached. The former bird would call, sometimes rapidly, giving either a "kreek" note similar to the flight note or a series of chattering trill notes. On three occasions a bird was heard to give a series of low hollow notes while in this position.

This behavior was successful only to a limited degree as in many instances the approaching bird would continue its movements toward the territorial bird. In such a situation the territorial Pectoral would run at the second bird in the head-high position continuing to call. If the second bird retreated at this point the conflict would usually end. However, if the second bird did not retreat or if it appeared that it did not retreat fast enough the aggressive Pectoral would fly at the second bird in a slow flight with legs dangling, still calling. On all observations this resulted in the second bird retreating, usually by flight and often followed for a short distance by the territorial bird. The second bird would also give call notes, especially in flight. On some occasions the territorial Pectoral would omit the running portion of the aggressive behavior and only perform the flight portion.

This whole behavioral pattern was most intense between two birds, both of which were engaged in this territorial behavior. Conflict between two such birds would often result in a return attack by the second bird. This usually occured when the aggressive bird followed the retreating bird for greater than usual distances in flight. However, physical contact between birds was never observed in any circumstance.

Individuals engaged in this behavior often stood on tree stumps in the water in their erect head-high position for as long as four or five minutes without moving and occasionally giving call notes. There were times when these various call notes could be heard from all parts of the slough.

## DISCUSSION

The observations concerning the territorial behavior of Pectoral Sandpipers during migration will be of more value if some attempt is made to understand the reason for this behavior. I find it hard to realize any value that these actions could have to the territorial birds that would give these birds an advantage over the other Pectoral Sandpipers. It would seem that this behavior could even be detrimental as it seems these territorial birds have less time for feeding and resting than the other members of the flock.

Hamilton (1959) made observations of territorial behavior in migrating Pectoral Sandpipers in Manitoba, Canada during the months of July and August. The birds he observed carried on behavior that much more closely resembled territorial behavior as it is performed by Pectorals on their breeding grounds than did the actions of the Ashland City birds. This consisted of larger territories with stable boundaries, considerably more display between birds and some actual combat. He believed that the actions of the birds he observed was an aftermath of the breeding-ground behavior and had no value to the birds in their present environment.

I think that the actions of the Ashland City birds supports this idea. This aftermath behavior would be the result of the lack of a complete regression of the internal stimuli which had produced the territorial behavior. In the Manitoba birds this regression had apparently only recently begun since these birds were still comparatively close to their breeding grounds and still early in their migration. In this situation the territorial urge was still relatively strong. It is to be expected that the regression would be more advanced farther south and later in the migration. This belief can be supported by the less envolved actions of the Ashland City birds.

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## TRIPS TO ASHLAND CITY MARSH — SUMMER 1961

| SPECIES: | DATES: | 7- | 7- | 7- | 7- | 8- | 8- | 8- | 8- | 8- | 8- | 8- | 8- | 9- | 9- | 9- |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 16 | 18 | 23 | 28 | 5 | 7 | 13 | 17 | 20 | 23 | 27 | 30 | 5 | 10 | 15 |
| SEMIPALMATED PLOVER | | .... | .... | .... | 1 | .... | 3 | 2 | .... | 7 | .... | 10 | 13 | .... | .... | 2 |
| KILLDEER | | 8 | 10 | 8 | 12 | 8 | 12 | 11 | 15 | 17 | 15 | 5 | 6 | .... | .... | .... |
| SPOTTED SANDPIPER | | 1 | 3 | 4 | 3 | .... | 3 | 4 | 5 | 1 | 2 | 1 | 2 | 1 | 2 | .... |
| SOLITARY SANDPIPER | | 1 | 1 | .... | 3 | 7 | 7 | 6 | 3 | 2 | 4 | 2 | .... | 1 | .... | .... |
| LESSER YELLOWLEGS | | 30 | 2 | 1 | 2 | 1 | 2 | .... | .... | .... | 2 | .... | .... | .... | .... | 4 |
| GREATER YELLOWLEGS | | .... | .... | .... | .... | .... | .... | 13 | .... | 27 | 2 | 6 | 4 | .... | 3 | 1 |
| PECTORAL SANDPIPER | | 60 | 16 | 20 | 34 | 4 | 3 | 34 | 30 | 45 | 30 | 37 | 23 | 6 | 11 | 13 |
| LEAST SANDPIPER | | 20 | 10 | 5 | 1 | 2 | 7 | 30 | 20 | 30 | 45 | 60 | 24 | 7 | 4 | 3 |
| DOWITCHER | | 2 | .... | .... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| STILT SANDPIPER | | .... | .... | .... | .... | 1 | 2 | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| SEMIPALMATED SANDP. | | 5 | 4 | 4 | 1 | .... | 3 | 8 | 4 | 15 | 1 | 5 | 4 | .... | .... | .... |
| WESTERN SANDPIPER | | .... | .... | 6 | .... | .... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | .... |

Most large numbers have been rounded off.

# THE 1962 SPRING FIELD DAYS

### By T.O.S. MEMBERS

Counts were made for 11 areas over the state, including the State Meeting at Crossville which included a two day period, a count from Columbia, which was also a new area and one from Cosby. This gave a total of 193 species which has been exceeded only by the 1961 (210 species) and 1960 (195 species) counts. Undoubtedly the count would have been larger had the Reelfoot Lake area been included as it was in 1961. The rather abrupt transition from spring to summer which coincided with the time of making the counts had its effect on migration. This was quite a contrast to the spring of 1961 when cool spring weather lasted well into May, which caused individuals or small flocks to linger in our area longer than usual.

Three species were new to the list this year. They were: Cattle Egret, Greater Scaup and Red Crossbill. Twelve species were represented by a single individual while 14 additional species were reported from only one area in contrast to 14 and 19 respectively for 1961. Considering only the tabulated counts, 43 species appeared on all lists in contrast to 53 species in the 1961 lists. This possibly indicates that coverage was less thorough in 1962 than 1961.

Little information accompanied the check-lists, therefore, comments are omitted.

As is the custom, the spring counts are listed in the table progressively from west to east. The abundance of all species observed are given in figures with the number of the species and individuals for each area at the end of the table and grand totals for all species observed over the state and individuals.

Since the Cosby list was relatively short and no species listed which does not occur in the table, this list follows in paragraph form. However, the total of individuals is included in the grand total of individuals.

COSBY. — Recreation area to Low Gap in Smoky Mountains. 4-22-62. Ruffed Grouse, 4; Yellow-shafted Flicker, 4; Pileated Woodpecker, 2; Red-bellied Woodpecker, 1; Hairy Woodpecker, 1; Phoebe, 1; Common Crow, 3; Tufted Titmouse, 1; Red-breasted Nuthatch, 3; Brown Creeper, 2; Winter Wren, 2; Ruby-crowned Kinglet, 5; White-eyed Vireo, 2; Solitary Vireo, 3; Black and White Warbler, 4; Yellow Warbler, 1; Black-throated Blue Warbler, 2; Black-throated Green Warbler, 3; Ovenbird, 9; Louisiana Waterthrush, 1; Scarlet Tanager, 1; Carolina Junco, 10. Total species, 23; total individuals, 65.

RICHARD NEVIUS, Greeneville.

# TABULAR RECORD OF SPRING FIELD DAYS

| | Memphis 4-29 | Columbia 5-2 & 3 | Cookeville 4-28 | Crossville 5-5 & 6 | Chattanooga 4-28 & 29 | Knoxville 4-29 | Greeneville 4-29 | Kingsport 5-13 | Bristol 4-28 & 29 | Elizabethton 4-28 & 29 |
|---|---|---|---|---|---|---|---|---|---|---|
| Common Loon | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 2 |
| Pied-billed Grebe | ...... | ...... | 2 | 1 | 2 | ...... | ...... | 2 | ...... | ...... |
| Great Blue Heron | ...... | ...... | ...... | 1 | 2 | 1 | ...... | ...... | 1 | ...... |
| Green Heron | ...... | 3 | 2 | 8 | 9 | 13 | 7 | 6 | 1 | 5 |
| Common Egret | ...... | 1 | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... |
| Cattle Egret | ...... | 3 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Bl.-cr. Night Heron | ...... | ...... | ...... | ...... | 2 | 1 | ...... | ...... | ...... | 1 |
| Yel.-cr. Night Heron | ...... | 2 | ...... | ...... | 6 | ...... | 2 | ...... | ...... | ...... |
| Am. Bittern | ...... | 1 | ...... | ...... | 2 | ...... | ...... | ...... | ...... | ...... |
| Canada Goose | ...... | ...... | ...... | ...... | ...... | ...... | 11 | ...... | ...... | ...... |
| Blue Goose | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| Mallard | ...... | ...... | ...... | 2 | 4 | ...... | 6 | ...... | 10 | 3 |
| Blue-winged Teal | 3 | 10 | ...... | 1 | 13 | 6 | 3 | ...... | ...... | 8 |
| Am. Widgeon | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 10 | 4 |
| Shoveler | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Redhead | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 8 | ...... |
| Wood Duck | 2 | 12 | ...... | 5 | 3 | 8 | ...... | 2 | ...... | 4 |
| Ring-necked Duck | ...... | ...... | ...... | ...... | 8 | ...... | ...... | ...... | ...... | ...... |
| Greater Scaup | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... | 12 | ...... |
| Lesser Scaup | 1 | ...... | ...... | 2 | 9 | ...... | 6 | 3 | ...... | 1 |
| Hooded Merganser | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| Common Merganser | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... |
| Turkey Vulture | 2 | 8 | 12 | 9 | 4 | 13 | 4 | 11 | ...... | 3 |
| Black Vulture | 7 | 7 | ...... | ...... | ...... | ...... | 5 | 2 | 2 | ...... |
| Sharp-sh. Hawk | ...... | ...... | ...... | 2 | ...... | 1 | 1 | ...... | ...... | ...... |
| Cooper's Hawk | ...... | ...... | 1 | 4 | 1 | 4 | 4 | ...... | 2 | 1 |
| Red-tailed Hawk | 1 | 1 | 2 | 10 | ...... | 6 | 3 | ...... | ...... | ...... |
| Red-sh. Hawk | 1 | ...... | 2 | 6 | 1 | 2 | ...... | ...... | ...... | ...... |
| Broad-winged Hawk | 5 | 2 | ...... | 12 | 4 | 10 | ...... | ...... | 1 | 2 |
| Osprey | ...... | ...... | ...... | 1 | ...... | 1 | ...... | ...... | ...... | ...... |
| Sparrow Hawk | ...... | 4 | 2 | 5 | 2 | 6 | 6 | ...... | 1 | 2 |
| Ruffed Grouse | ...... | ...... | ...... | 5 | ...... | ...... | ...... | ...... | 1 | 3 |
| Bobwhite | 20 | 24 | 29 | 36 | 59 | 75 | 25 | 15 | 18 | 26 |
| Turkey | ...... | ...... | ...... | 3 | ...... | ...... | ...... | ...... | ...... | ...... |
| Sora | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Am. Coot | ...... | 3 | ...... | 1 | 16 | ...... | ...... | ...... | 6 | ...... |
| Semipal. Plover | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... |
| Killdeer | 2 | 11 | 7 | 19 | 26 | 56 | 39 | 5 | 1 | 13 |
| Am. Woodcock | ...... | 1 | ...... | ...... | ...... | 5 | ...... | ...... | ...... | ...... |
| Com. Snipe | ...... | 11 | ...... | 1 | 4 | 5 | 3 | ...... | ...... | 3 |
| Spot. Sandpiper | 2 | 4 | ...... | 11 | 17 | 16 | 1 | 7 | ...... | 8 |
| Sol. Sandpiper | 1 | 6 | ...... | 2 | 7 | 16 | 4 | ...... | ...... | 11 |
| Gr. Yellowlegs | ...... | 3 | ...... | ...... | 7 | 3 | ...... | 2 | 3 | 3 |
| Lsr. Yellowlegs | 5 | 7 | ...... | 5 | 18 | 2 | 1 | 10 | ...... | 61 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pect. Sandpiper | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Least Sandpiper | ...... | 6 | ...... | ...... | ...... | 1 | ...... | ...... | ...... | 1 |
| Semipal. Sandpiper | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 3 | ...... | ...... |
| Western Sandpiper | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 2 | ...... | ...... |
| Herring Gull | ...... | ...... | ...... | ...... | 2 | 1 | 1 | ...... | ...... | ...... |
| Ring-billed Gull | ...... | ...... | ...... | ...... | ...... | 15 | ...... | ...... | 1 | 12 |
| Common Tern | ...... | 1 | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... |
| Mourning Dove | 13 | 31 | 49 | 64 | 184 | 313 | 95 | 40 | 107 | 51 |
| Yel.-bld. Cuckoo | 1 | 2 | 2 | 7 | 7 | 23 | 2 | 15 | ...... | 2 |
| Bl.-bld. Cuckoo | ...... | ...... | ...... | 1 | 1 | 6 | 1 | 1 | ...... | 1 |
| Barn Owl | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... |
| Screech Owl | ...... | 1 | ...... | 1 | 2 | 5 | ...... | ...... | 1 | 1 |
| Grt. Horned Owl | ...... | ...... | ...... | 1 | ...... | 4 | ...... | ...... | ...... | ...... |
| Barred Owl | 1 | 6 | ...... | 2 | ...... | 2 | ...... | ...... | ...... | ...... |
| Chuck-will's Widow | ...... | 5 | ...... | ...... | 19 | 10 | 4 | 1 | 1 | 1 |
| Whip-poor-will | ...... | 7 | 3 | 6 | 4 | 7 | 12 | 2 | ...... | 3 |
| Com. Nighthawk | 1 | 2 | 2 | 6 | 8 | 5 | 7 | 23 | 6 | 4 |
| Chimney Swift | 8 | 75 | 70 | 30 | 601 | 329 | 210 | 40 | 25 | 66 |
| Ruby Th. Hummingbird | 8 | 1 | 11 | 9 | 10 | 11 | 4 | 2 | 6 | 1 |
| Belted Kingfisher | 5 | 1 | 1 | 4 | 8 | 9 | 5 | 5 | 6 | 9 |
| Yel.-sh. Flicker | 11 | 1 | 23 | 20 | 77 | 114 | 54 | 19 | 59 | 47 |
| Pileated Woodpecker | 4 | 6 | 3 | 10 | 10 | 28 | 8 | 7 | 1 | 5 |
| Red-bel. Woodpecker | 26 | 20 | 15 | 14 | 32 | 37 | 12 | 1 | ...... | 3 |
| Red-hd. Woodpecker | ...... | 1 | 3 | 19 | 23 | 20 | 9 | 1 | ...... | 2 |
| Yel.-bel. Sapsucker | 1 | ...... | 2 | 1 | 1 | 3 | ...... | ...... | 2 | ...... |
| Hairy Woodpecker | 3 | 2 | 5 | 7 | 6 | 8 | 2 | ...... | ...... | 2 |
| Downy Woodpecker | 9 | 14 | 16 | 20 | 36 | 34 | 19 | 8 | 17 | 8 |
| Red-cocka. W'pecker | ...... | ...... | ...... | 9 | ...... | ...... | ...... | ...... | ...... | ...... |
| E. Kingbird | 4 | 11 | 7 | 33 | 16 | 26 | 15 | 6 | 12 | 9 |
| Gr. Crest. Flycatcher | 12 | 14 | 8 | 50 | 47 | 39 | 21 | 22 | 1 | 3 |
| E. Phoebe | 3 | 6 | 3 | 29 | 11 | 49 | 34 | 20 | 8 | 20 |
| Acadian Flycatcher | 5 | 10 | ...... | 5 | 1 | 1 | 2 | 9 | ...... | ...... |
| Least Flycatcher | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | 16 |
| Wood Pewee | 16 | 12 | 4 | 34 | 12 | 9 | 8 | 19 | 1 | 3 |
| Olive-sd. Flycatcher | ...... | ...... | ...... | ...... | 1 | ...... | ...... | 1 | ...... | ...... |
| Horned Lark | 1 | ...... | 2 | 6 | 4 | 11 | 6 | 1 | 3 | 4 |
| Tree Swallow | ...... | 1 | ...... | 1 | 1 | 4 | ...... | ...... | ...... | ...... |
| Bank Swallow | ...... | ...... | 8 | ...... | ...... | 21 | 3 | 2 | ...... | 11 |
| Rough-w. Swallow | 26 | 25 | ...... | 19 | 50 | 72 | 15 | 27 | ...... | 15 |
| Barn Swallow | 7 | 23 | 15 | 26 | 43 | 39 | 60 | 12 | 17 | 13 |
| Cliff Swallow | ...... | ...... | ...... | ...... | 257 | 6 | ...... | ...... | ...... | ...... |
| Purple Martin | 5 | ...... | 6 | 3 | 276 | 143 | 27 | 22 | 8 | 6 |
| Blue Jay | 32 | 55 | 127 | 76 | 488 | 626 | 160 | 72 | 209 | 142 |
| Com. Raven | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 5 |
| Com. Crow | 10 | 25 | 83 | 45 | 133 | 284 | 40 | 60 | 69 | 85 |
| Fish Crow | 5 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Carolina Chickadee | 27 | 20 | 17 | 29 | 72 | 159 | 24 | 27 | 34 | 19 |
| Tufted Titmouse | 42 | 37 | 39 | 73 | 144 | 176 | 47 | 45 | 50 | 34 |
| Wh.-br. Nuthatch | ...... | 3 | 10 | 20 | 19 | 8 | 3 | 8 | 1 | 2 |
| Red-br. Nuthatch | 1 | ...... | ...... | 8 | 4 | 11 | 2 | ...... | ...... | 11 |
| Brown Creeper | 1 | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| House Wren | ...... | ...... | ...... | ...... | ...... | ...... | 14 | 11 | 6 | 3 |
| Winter Wren | ...... | ...... | 4 | ...... | ...... | ...... | ...... | ...... | ...... | 16 |
| Bewick's Wren | ...... | 1 | 9 | 7 | 3 | 1 | 3 | 3 | ...... | 2 |
| Carolina Wren | 44 | 11 | 12 | 20 | 106 | 117 | 23 | 26 | 26 | 36 |
| Mockingbird | 6 | 30 | 30 | 25 | 150 | 358 | 69 | 47 | 69 | 59 |
| Catbird | 9 | 19 | 16 | 28 | 26 | 56 | 32 | 21 | 20 | 21 |
| Brown Thrasher | 30 | 16 | 43 | 35 | 69 | 130 | 72 | 27 | 49 | 52 |
| Robin | 7 | 22 | 64 | 75 | 161 | 300 | 154 | 39 | 174 | 159 |
| Wood Thrush | 22 | 6 | 10 | 33 | 138 | 141 | 38 | 46 | 48 | 34 |
| Swainson's Thrush | 16 | 1 | ...... | 4 | 6 | 5 | 3 | 7 | ...... | ...... |
| Gray-cheeked Thrush | ...... | ...... | ...... | 1 | ...... | 2 | ...... | 1 | ...... | 1 |
| Veery | 1 | 3 | ...... | 3 | 3 | 4 | ...... | ...... | ...... | 6 |
| Bluebird | ...... | 34 | 10 | 39 | 62 | 36 | 55 | 2 | 3 | 6 |
| Bl.-gr. Gnatcatcher | 33 | ...... | 8 | 60 | 58 | 81 | 45 | 22 | 1 | 18 |
| Golden-cr. Kinglet | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 11 |
| Ruby-cr. Kinglet | ...... | ...... | ...... | 4 | 4 | 9 | 1 | ...... | ...... | 1 |
| Shrike | 2 | 15 | ...... | 6 | 10 | 12 | ...... | ...... | 3 | 1 |
| Water Pipit | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| Cedar Waxwing | 10 | 2 | 2 | 40 | 81 | 100 | 3 | 40 | 31 | ...... |
| Starling | 14 | 330 | 48 | 48 | 1,010 | 825 | 278 | 60 | 585 | 515 |
| White-eyed Vireo | 37 | 14 | 6 | 18 | 67 | 82 | 9 | 23 | 4 | 21 |
| Yel.-th. Vireo | 4 | 2 | ...... | 17 | 22 | 15 | 2 | 8 | ...... | 5 |
| Solitary Vireo | ...... | ...... | ...... | 1 | ...... | 1 | ...... | ...... | ...... | 23 |
| Red-eyed Vireo | 35 | 20 | 11 | 33 | 199 | 182 | 10 | 56 | 3 | 32 |
| Philadelphia Vireo | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | 1 |
| Warbling Vireo | 1 | ...... | ...... | 2 | 2 | 5 | ...... | 1 | ...... | 5 |
| Bl. & Wh. Warbler | 3 | 7 | ...... | 24 | 36 | 56 | 9 | 15 | 13 | 28 |
| Prothonotary Warbler | 21 | 14 | ...... | ...... | 8 | 9 | ...... | 6 | ...... | ...... |
| Swainson's Warbler | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Worm-eating Warbler | 6 | 2 | ...... | 4 | 4 | 11 | 1 | 11 | 6 | 16 |
| Golden-wing. Warbler | ...... | ...... | ...... | 6 | ...... | 6 | ...... | ...... | ...... | ...... |
| Blue-wing. Warbler | 1 | 9 | ...... | ...... | 1 | 6 | ...... | ...... | ...... | ...... |
| Lawrence's Warbler | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Tennessee Warbler | 35 | 8 | ...... | 8 | 2 | 9 | ...... | 5 | ...... | ...... |
| Orange-cr. Warbler | ...... | ...... | ...... | ...... | 1 | 1 | ...... | ...... | ...... | ...... |
| Nashville Warbler | 4 | 7 | ...... | ...... | ...... | 4 | 10 | ...... | ...... | ...... |
| Parula Warbler | 16 | 4 | ...... | 9 | ...... | 6 | ...... | 10 | ...... | 8 |
| Yellow Warbler | ...... | 11 | 8 | 18 | 41 | 80 | 37 | 31 | 7 | 89 |
| Magnolia Warbler | ...... | ...... | 1 | 1 | ...... | 9 | 2 | 3 | ...... | 2 |
| Cape May Warbler | ...... | 3 | ...... | 20 | 70 | 5 | ...... | 2 | ...... | 2 |
| Bl.-th. Blue Warbler | ...... | ...... | ...... | 2 | ...... | 15 | ...... | 1 | ...... | 12 |
| Myrtle Warbler | 3 | 39 | ...... | 34 | 226 | 166 | 27 | 3 | 8 | 11 |
| Bl.-th. Green Warbler | 3 | ...... | ...... | 7 | 11 | 28 | 1 | 1 | ...... | 26 |
| Cerulean Warbler | 16 | 15 | ...... | ...... | 6 | 31 | ...... | 18 | ...... | ...... |
| Blackb. Warbler | 4 | ...... | 3 | 4 | 6 | 15 | ...... | 5 | ...... | ...... |
| Yellow-th. Warbler | 1 | 4 | 6 | 11 | 4 | 9 | ...... | ...... | ...... | ...... |
| Chestnut-sd. Warbler | 1 | 6 | ...... | 5 | 4 | 10 | ...... | ...... | ...... | 15 |
| Bay-breasted Warbler | ...... | ...... | ...... | 5 | ...... | 4 | ...... | 10 | ...... | 1 |
| Blackpoll Warbler | ...... | 10 | ...... | 13 | 80 | 22 | ...... | 3 | ...... | ...... |
| Pine Warbler | ...... | ...... | 1 | 19 | 19 | 17 | ...... | 2 | ...... | 3 |
| Prairie Warbler | ...... | 6 | ...... | 76 | 51 | 60 | 1 | 13 | ...... | 9 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Palm Warbler | ...... | 35 | ...... | 16 | 103 | 10 | 1 | ...... | ...... | 5 |
| Ovenbird | 6 | 5 | ...... | 47 | 23 | 34 | 6 | 20 | ...... | 37 |
| No. Waterthrush | ...... | 4 | ...... | 1 | 4 | ...... | ...... | ...... | ...... | ...... |
| La. Waterthrush | 5 | 8 | ...... | 11 | 13 | 6 | 4 | 5 | 2 | 2 |
| Ky. Warbler | 24 | 16 | 1 | 11 | 20 | 27 | ...... | 24 | ...... | 5 |
| Yellowthroat | 9 | 10 | 3 | 35 | 42 | 74 | 28 | 26 | 1 | 42 |
| Yel.-br. Chat | 18 | 19 | ...... | 45 | 52 | 41 | 13 | 37 | ...... | 29 |
| Hooded Warbler | 12 | 3 | ...... | 11 | 16 | 21 | 1 | 23 | 8 | 48 |
| Wilson's Warbler | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... |
| Canada Warbler | ...... | ...... | ...... | ...... | 3 | 2 | 1 | 5 | ...... | 4 |
| Am. Redstart | 40 | 8 | ...... | 9 | 6 | 11 | 4 | 14 | 11 | 13 |
| House Sparrow | 3 | 38 | 56 | 26 | 293 | 208 | 84 | 57 | 238 | 330 |
| Bobolink | 2 | 88 | 3 | ...... | 500 | 35 | ...... | ...... | ...... | 22 |
| E. Meadowlark | 12 | 64 | 59 | 80 | 299 | 646 | 249 | 63 | 174 | 155 |
| Redwing Blackbird | 5 | 75 | 50 | 71 | 185 | 481 | 86 | 27 | 61 | 101 |
| Orchard Oriole | 8 | 15 | 6 | 9 | 31 | 50 | 38 | 16 | 2 | 15 |
| Baltimore Oriole | 18 | 1 | ...... | 10 | 13 | 3 | 1 | 9 | ...... | 7 |
| Rusty Blackbird | ...... | ...... | ...... | ...... | 2 | 6 | ...... | ...... | ...... | 3 |
| Com. Grackle | 25 | 85 | 55 | 43 | 183 | 601 | 165 | 66 | 723 | 465 |
| Brown-hd. Cowbird | 60 | 63 | 116 | 27 | 109 | 108 | 34 | 77 | ...... | 57 |
| Scarlet Tanager | 9 | 7 | 4 | 51 | 42 | 24 | 6 | 15 | 1 | 12 |
| Summer Tanager | 32 | 9 | 11 | 19 | 48 | 47 | 38 | 18 | ...... | 2 |
| Cardinal | 50 | 42 | 123 | 37 | 329 | 560 | 123 | 59 | 136 | 118 |
| Rose-br. Grosbeak | 3 | 7 | 2 | 19 | 44 | 42 | 10 | 30 | 12 | 23 |
| Blue Grosbeak | 2 | 1 | ...... | ...... | 11 | 1 | 5 | ...... | ...... | ...... |
| Indigo Bunting | 30 | 37 | 18 | 57 | 72 | 58 | 37 | 50 | 9 | 9 |
| Dickcissel | 13 | 23 | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... |
| Evening Grosbeak | ...... | 1 | ...... | 10 | 51 | 12 | 22 | ...... | ...... | 24 |
| Purple Finch | ...... | ...... | ...... | ...... | 6 | 88 | 87 | ...... | 29 | 146 |
| Pine Siskin | ...... | ...... | ...... | ...... | 15 | ...... | 5 | ...... | ...... | ...... |
| Am. Goldfinch | 10 | 130 | 58 | 254 | 151 | 266 | 163 | 21 | 51 | 390 |
| Red Crossbill | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 2 |
| Rufous-sd. Towhee | 16 | 19 | 67 | 36 | 241 | 394 | 45 | 28 | 58 | 93 |
| Savannah Sparrow | 1 | 4 | ...... | 2 | 27 | 1 | 5 | ...... | ...... | 3 |
| Grasshopper Sparrow | ...... | 6 | ...... | 5 | 11 | 21 | 30 | 8 | ...... | 17 |
| Vesper Sparrow | ...... | ...... | 2 | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| Bachman's Sparrow | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| Slate-col. Junco | ...... | ...... | 22 | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Carolina Junco | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | 49 |
| Chipping Sparrow | 1 | 10 | 19 | 54 | 45 | 92 | 29 | 11 | 13 | 72 |
| Field Sparrow | 1 | 26 | 26 | 49 | 95 | 193 | 72 | 35 | 9 | 116 |
| White-cr. Sparrow | 2 | 9 | 2 | 6 | ...... | 27 | 21 | ...... | 20 | 15 |
| White-th. Sparrow | 120 | 14 | 48 | 27 | 123 | 259 | 36 | 5 | 55 | 39 |
| Lincoln's Sparrow | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Swamp Sparrow | ...... | 6 | ...... | 3 | 6 | 2 | 5 | ...... | ...... | 2 |
| Song Sparrow | ...... | 2 | 3 | 8 | 51 | 236 | 50 | 45 | 54 | 96 |
| TOTALS | | | | | | | | | | |
| Individuals | 1,266 | 2,113 | 1,639 | 2,698 | 8,851 | 10,652 | 3,446 | 1,961 | 3,446 | 4,602 |
| Species | 103 | 122 | 78 | 134 | 136 | 146 | 109 | 105 | 79 | 131 |

GRAND TOTALS Individuals ............ 40,741 Species ............ 192

# T. O. S. ANNUAL MEETING, 1962

The Tennessee Ornithological Society held its annual meeting on May 4-6, 1962, at Cumberland Mountain State Park near Crossville, Tenn. Attracted by Mr. Gene Ruhr's vivid account of the park, a few members arrived as early as Wednesday preceding the meeting. Charmed by the surroundings, they stayed, as did several later arrivals, until the following Tuesday.

Registration began Friday evening at the park dining room where Mr. and Mrs. Kirby Stringer were hosts for refreshments and Mr. Ruhr showed the excellent nature film, "The Great Adventure."

Saturday morning a motorcade travelled into the Catoosa Wildlife Management Area as far as Daddy's Creek. Mr. Albert F. Ganier, hike leader, was assisted by Area personnel. Of the stops made along the way, those at the nesting holes of the Red-cockaded Woodpecker were especially rewarding. Three pairs of these rare birds were seen.

At the Daddy's Creek crossing, hikers paused to photograph wild flowers, a huge, balanced rock, and the beautiful gorge. Some tarried at the creek for picnic lunches. Others drove to the Potter Farmhouse in the Catoosa Area and lunched under the apple trees,, to the music of Yellow Warblers.

The Board of Directors met in the Farmhouse at 2:00 o'clock while other members birded in the surrounding fields and orchard. Thirty two officers, directors and proxies were present.

The annual dinner, at the park dining room at 7:00 o'clock Saturday evening was followed by the regular business meeting and program. The President, Mr. Edward M. King, presided. One hundred and thirty three members and visitors attended. Mr. King presented to the membership several recommendations of the Board. All were approved.

The Constitution and By-Laws were amended to read thus:

ARTICLE II — MEMBERS

Sec. 1 The membership shall consist of Active, Sustaining, Life, Honorary, Corresponding, and Student Members.

Sec. 6 A Student Member shall be a student enrolled in any grade school, high school, college or university.

BY-LAWS — **Dues**

The annual dues to be paid to the Tennessee Ornithological Society by each Member shall be as follows: Active Member, $2.50; Sustaining Member, $5.00; Corresponding Member, $2.00; Student Member, $1.00. A member may become a Life Member by a single payment of $50.00 to the Society's endowment fund. Honorary Members shall not be liable for dues. Libraries and similar subscribers shall pay $2.00 per year. All members and subscribers shall receive **THE MIGRANT.** Local chapters may add to the dues of members whatever is necessary to cover the expenses of the local chapter. Local chapters are authorized to establish Family Memberships. A Family Membership shall pay annual dues to the Society of $3.00 and shall receive one copy of each issue of **THE MIGRANT.**

The following officers were elected: President, Mr. Edward M. King, Memphis; Vice-President from East Tennessee, Mr. Kenneth Dubke, Elizabethton; from Middle Tennessee, Mrs. James Haile, Cookeville; from West Tennessee, Mrs. Rose Wooldridge, Memphis; Secretary, Mrs. J. H. Mc-

Whorter, Memphis; Treasurer, Mr. Henry E. Parmer, Nashville; Curator, Mr. Albert F. Ganier, Nashville; Editor, Dr. Lee R. Herndon, Elizabethton; Director-at-Large, from East Tennessee, Mr. John Elson, Knoxville; from Middle Tennessee, Dr. George Mayfield, Jr., Columbia; from West Tennessee, Mr. L. D. Thompson, Paris.

Mr. Thomas W. Finucane, coordinator for the Hawk Count, reported on the special work being done in that field. Mr. Ruhr accepted editorship of the **Newsletter** for the coming year.

Speakers for the evening, members of the Society, were introduced by Mr. Ganier. They were: Dr. Lee R. Herndon, "What Can Be Done to Improve **The Migrant?";** Dr. James T. Tanner, "After You Have Identified All of the Birds, What Do You Do Next?"; Miss Mary Davant, "Worthwhileness of Being a Member of T.O.S."

Sunday morning, small, informal groups formed to enjoy the restful park area and its wildlife. Others drove to Harrison Lake where many birds had been observed on Friday. After lunch at the dining room, members met on the patio to report birds found during the days of the meeting. Mr. Parmer was compiler. Species listed totalled 134.

The following resolution was adopted by the Society:

"Whereas, the Tennessee Ornithological Society, assembled in its annual meeting, May 4, 5 and 6, 1962, at Cumberland Mountain State Park, Crossville, Tenn., does consider this one of its most successful meetings, and

Whereas, the planning and leadership of those responsible for this meeting has contributed significantly to the pleasure and success of this conclave, now therefore be it

Resolved, that the Society express its gratitude to the entire Nashville Chapter, and especially to its President, Mr. Henry Parmer, to Mr. Gene Ruhr, Mr. Albert Ganier, Mr. and Mrs. Kirby Stringer, Mrs. William Bell, and members of her Committee on Decorations, Mrs. William Puryear and Mrs. George Woodring, for the fine work all these folks have accomplished in aranging the details of this meeting; and to members of the official staff of Cumberland Mountain State Park and those connected with the dining hall, for their fine co-operation and assistance in taking care of the members of the Society; and to those members of the Fish and Game Commission of State of Tennessee, headed by Mr. Gene Ruhr, and including Mr. Carl Brown, Mr. Ralph Plumb and Mr. Ennis Williams, for having contributed so much to the success of our Saturday trip into the Catoosa Wildlife Area; and to Mr. Gene Ruhr and Mr. Paul Adams for the generous showing of their films to members of the Society on Friday evening.

Be it further resolved, that the Society express its sincere thanks to Mr. Gene Ruhr for his continued efforts and fine work in producing the **Newsletter** and getting it off promptly each quarter to Dr. Herndon, our Editor, for mailing; and to all those concerned with publishing and mailing **The Migrant,** mentioning the very special efforts of Dr. Lee Herndon, the Editor, and to Mr. Henry Parmer, whose duty it is to address all the labels and stick them, and provide the envelopes to Dr. Herndon."

The 1963 annual meeting will be held in East Tennessee with the Chattanooga Chapter as hosts.

MRS. J. H. McWHORTER, Secretary, 817 Goodwyn, Memphis 11.

# ROUND TABLE NOTES

TWO PURPLE GALLINULES IN KNOX COUNTY. — During the last two weeks of April a Purple Gallinule appeared almost daily for an hour or two in mid-morning in the back yard at the home of Mr. and Mrs. G. H. Baker, 8 Century Court, Knoxville. I watched the bird at close range from Mrs. Baker's dining room window on May 2. It picked up insects in the freshly mowed grass and Mrs. Baker said it often walked on top of some ivy looking for slugs. It was last seen May 5. The yard is on a hill near Bearden High School and a considerable distance from water.

On May 1, two boys were waiting for a school bus on Cogdill Road in Concord and noticed an odd bird feeding in grass nearby. They chased and caught it, apparently injuring one of its legs in the process. The bird, a second Purple Gallinule, was placed in a cage at the home of one of the boys parents, Mr. and Mrs. Paul Cofer, where I saw it a few days later, still unable to use one leg. The place this gallinule had been found was a mile or so from Andrew Jackson Lake and possibly ten miles from where the other gallinule was making its appearances.

My files of THE MIGRANT extend only back through 1941 and mention only one Purple Gallinule in East Tennessee and that was in October, 1958, also in Knox County.

J. B. OWEN, 2722 Fairview St., Knoxville, Tenn.

GOLDEN-WINGED WARBLER BUILDING NEST AT CUMBERLAND MT. STATE PARK. — On May 6, 1962, during a before breakfast bird walk, Gene West and the writer discovered the nearly complete nest of a Golden-winged Warbler in a scrubby, briary area bordering one of the park lodges. The actions of a female carrying one tiny piece of nest material made it very obvious that I was standing too close to her destination. When I backed away, she went to it readily.

Afraid she might abandon it and anxious to return for moviemaking, we did not inspect it closely. However, it was empty of eggs but appeared about ready for them. The nest was constructed mostly of dead grass, the whole structure being set into a clump of the same. It was about 4" deep and the top was maybe a foot above the ground.

At this early morning hour she made frequent trips with just one slim piece, sometimes spending an estimated 30 seconds inside. On a return visit near noon, neither of the pair were seen or heard, though the male had been much in evidence earlier.

The curiosity of a cat that had to be run off does not augur well for the success of this nesting.

Mr. Albert Ganier is the authority for the statement that this is the first nest record on the Cumberland Plateau. I do not know the breeding status of the species on a statewide basis.

MRS. E. M. WEST, 5511 Dayton Blvd., Chattanooga 5.

EVENING GROSBEAK VISITORS. — The most interesting wild bird visitors to our feeding shelves the past winter and spring were a flock of Evening Grosbeaks. A large number of them headquartered at our home from the last of January until May 12. We have a large hackberry tree well fruited with berries and five large maples in their seed year. In addition, Mrs. McCollum and I provided sunflower seed and they accounted for the better part of a hundred pound bag.

CLYDE E. McCOLLUM, Pikeville, Tenn.

LATE EVENING GROSBEAKS IN GATLINBURG. — The last day for Evening Grosbeaks in Gatlinburg and vicinity was 14 May. But, to our surprise, a lone male turned up at a feeding station near Mt. View Hotel on 1 June and was there through 5 June.

ARTHUR STUPKA, Gatlinburg, Tenn.

NOTE. — Evening Grosbeaks, having found our state and learning to like it, are now returning almost yearly. They have learned to use new foods and are no longer dependent on seed from cones of pine and spruce. Mrs. C. F. DeLap of Springfield had from one to three at or near her home, "Bird Song Garden", from 10 to 27 April. She saw 14 feeding on buds of tulip poplar, 22 April, at Ridgetop Lake. At Columbia, G. R. Mayfield, Jr., reports that nine were seen there the last week in April and two had remained to 2 May. One of the small flocks recorded at our annual meeting at Cumberland State Park, 3-5 May, was observed on the ground feeding upon the brown blossoms that had fallen from oak trees.

ALBERT F. GANIER, 2112 Woodlawn Drive, Nashville.

A WHIP-POOR-WILL FORAY. — On the late afternoon of May 18, Mr. and Mrs. J. C. Browning, Ken Dubke, Mr. and Mrs. Lee R. Herndon, Mr. and Mrs. Basil King and Roby D. May, Jr., took a picnic supper and headed across the Holston Mountain for the south shore of South Holston Lake. We arrived just in time to complete our supper by 8:15 p. m. when the first Whip-poor-will song was heard. Within a few minutes other Whip-poor-wills joined in the chorus and two birds came out of the woods and lit on the road near each other and us. By careful and slow approach some of our number were able to approach to within three feet of the birds and by the aid of a flashlight were able to observe them at close range and to good advantage before they took wing.

Although the sky was clear and the temperature pleasant, the moon, which was practically full, had not appeared over the mountain, the night was not particularly dark.

On our return trip we decided to stop, listen and count singing Whip-poor-wills every half mile. The first few stops we all stopped together. Since the road was very dusty and we were in two cars, the proposal was made that we play leapfrog the rest of the way, that is, one car would stop on the half-mile while the other would stop on the mile and at the conclusion we would get together and total our counts over the 16 mile route. The same route was covered as that reported in THE MIGRANT: 30, 31, 1959. A total of 73 singing Whip-poor-wills was logged and at one stop one of the groups heard a Barred Owl singing in the direction of the top of the Mountain. This number compares with 56 reported for the 1959 foray, which was almost a month earlier than this one.

For most of the group this was a new and rewarding experience and we recommend that other groups plan similar excursions in future years.

LEE R. HERNDON.

CHUCK-WILL'S-WIDOW NEAR WATAUGA LAKE. — About mid-afternoon of Saturday, 12 May Clarence Raulston and Robert Madgitt, who were working on a houseboat on Watauga Lake at the Lake Shores Boat Dock, reported hearing a Whip-poor-will which appeared to be singing off key. It was heard again the following week end in the same place. On

Tuesday evening, 29 May, I accompanied Raulston and Oran Diddle to the area for the purpose of banding some nestling Phoebes. At dusk, about 8:15 p. m., the bird which had been singing in "off key" began to sing. I recognized the song immediately as that of the Chuck-will's-widow *(Antrostomus carolinensis).* It continued to sing at irregular intervals for about half an hour after which it did not sing again during the remaining hour we were in the area.

The bird was on the point between the Lake Shores Boat Dock and the Y's Men's Picnic area and between the highway and Watauga Lake. The water level in Watauga Lake at the time was about the 1947′ level which would place the bird in the vicinity of the 2000′ level. This would be about 400′ higher elevation than the nest of this species found near Bluff City near the South Holston River in 1960 (THE MIGRANT, **31:** 57). This is the third record of this species' occurrence in Carter County. The other two records are in THE MIGRANT: **27,** 53 and 65, 1956 and **28,** 46, 1957.

LEE R. HERNDON, Elizabethton, Tenn.

WESTERN GREBE, PATRICK HENRY LAKE, KINGSPORT.—On Friday, November 17, 1961, behind Patrick Henry dam on the Holston River parallel to the road leading to Hemlock Community, I saw three Western Grebes *(Aechmophorus occidentalis).* It had been a week of warm weather following the first hard freeze the previous week. The temperature had gone as high as 75°F in the afternoon and no lower than 60°F at night. It was a clear morning. I first noticed the birds because of the light reflected from their long white throats. I was perhaps as close as 50 yards when I set up my 20X telescope and watched them for ten or fifteen minutes. They were feeding and paddling along in a leisurely way. The contrast of their black backs and flat caps with their long glistening white throats was very marked. In the telescope their backs were speckled as illustrated in the Audubon Water Bird Guide.

On the following Wednesday, November 22, within about twenty or thirty minutes, I saw three species of grebe, Pied-bills at the State Park, three Western again at Hemlock, and nine Horned at Boone. It was a very interesting lesson in contrasting and comparative size and markings.

ANN SWITZER, 1620 Fairidge Place.

ED. NOTE: There is no other state record for this species, therefore should be placed on the hypothetical list until further substantiated.

## BOOK REVIEWS

HANDBOOK OF NORTH AMERICAN BIRDS. Volume 1, Loons through Flamingos. Edited by Ralph S. Palmer. Sponsored by American Ornithologists' Union and the New York Museum and Science Service. Yale University Press, New Haven, Conn. Publication Date — May 23, 1962. Pps. 567. $15.00.

This volume assembles in summary form accounts of all species of birds found in North America north of Mexico, including Greenland and Bermuda. Recognized specialists have provided the material from which these summaries are derived and the sources are listed under the section "Literature Cited" just preceding the "Index". A simplified and more universal color standard has been included, which will aid materially in visualizing the various plumages and molts as well as illustrations of taking characteristic measurements and sketches showing detailed anatomical features of the bird. Detailed maps showing the breeding and wintering ranges of each species, illustrations of characteristic behavior and poses, comparisons with similar species and six color plates add greatly to the appearance of the book.

Each species is described in detail in nontechnical terms with key words in **bold face type** to facilitate finding a specific item in a paragraph. Physical measurements are presented in millimeters and weights in grams. Geographical variations and subspecies are given where they are known to exist. Excellent details are presented concerning field identification, voice, habitat, migration, banding status, reproduction, displays, copulation, nest, clutch size, distraction displays, hatching success, flightless period, habits and food.

For the serious bird student, amateur or professional — "This monumental work, of which this is the first volume, summarizes the existing knowledge and is certain to be the standard reference work for years to come."

LEE R. HERNDON.

ALABAMA BIRDS. By Thomas A. Imhof. Published for the State of Alabama, Department of Conservation, Game and Fish Division, 1962, by University of Alabama Press. 591 pps. $7.50.

A frontispiece of a Wild Turkey gobbler in dogwood blossom time painted by Walter A. Weber, of the National Geographic Society is a fine introduction to the book. The first 43 pages are devoted to Bird Study in its varied phases, particularly as it applies to Alabama. Included are equipment for bird study, attracting the birds, literature, topography, laws relating to birds, migrations and banding.

Pages 44 through 58 entitled "Species Accounts" deals with the known facts concerning each of the 352 species known to occur in the state. A general outline of what is included and the order in which it is presented is given under each order. A brief description of each species is given with distinctive features of both sexes, where they differ, set in italics to facilitate identification. Where and when to find the birds in Alabama, with maps for 62 species indicate more specifically where they have been found. Their occurrence is indicated, whether accidental, casual, rare, uncommon, fairly common, common or abundant. Nesting information is given for the 159 species known to nest in the state. Information on food and feeding habits has been drawn from Alabama as much as possible but not limited to this area.

Abundance data, time of breeding and banding data are included as well as a state map indicating the locations mentioned frequently in the text. The main portion of the book is devoted to details of the 352 species in the order listed. Many photographs, maps and the excellent watercolor paintings of land birds by Richard A. Parks and the oil paintings of water birds by David C. Hulse of 329 species are appropriately dispersed throughout the text.

A table of contents, glossary, bibliography, species index and cross-references in the text to the plates and maps make the book very useful.

Due to the proximity of Alabama to Tennessee and the similarity of birds of the two states the book would be a valuable addition to the reference library of all T.O.S. Members.

LEE R. HERNDON.

# THE MIGRANT

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*The Tennessee Ornithological Society*
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## EDITORIAL

Almost daily we see and hear evidence of the destruction of bird habitats caused by the expansion of our cities and towns, industrial developments and road building. Wood lots are being leveled, marsh and wet lands being drained to make farm land to produce more crops to add to the surplus upon which we are already paying enormous sums for storage, or in some cases to be piled up and permitted to decay.

In our immediate neighborhood, and I am sure it is not unique, in the past 20 years we have seen many of our favorite birding areas gradually whittled down till they are no longer suitable habitats for birds. The most recent intrusion of industry on favorable bird habitat has been at the County Farm where a formerly marshy area and marginal land has been ditched, partially filled in and bulldozed for roadways, a research center and manufacturing plant. A few years ago the land could have been purchased for a nominal sum. Now the land is selling for $1,000 per acre. The area under discussion includes the major portion of the area in which we found the first Traill's Flycatcher breeding area in Tennessee. The birds have returned to the area but there is so much activity in the immediate vicinity that their numbers are greatly reduced and the indications are that they will not nest in the area this year. The closest other area in which this species may breed is 30 miles away in Shady Valley and no nest has been found there, although the birds were present during the breeding season the two previous years and are present again this year. Even now plans are afoot to drain and improve this area for farming so that it will no longer be a suitable habitat for these or other marsh breeding birds.

The former area, the County Farm, was also the area in which we have mist netted and banded more than 6,000 birds of almost 100 species during the past three fall migration seasons. The suitable netting area has already been reduced to less than half its former area and the adjacent farm land taken out of cultivation so that it will be less attractive as a feeding and resting place for birds on their fall migration. A similar area cannot be found for miles around. It is highly probable that the remainder of the area will soon yield to a similar fate as residential developments spring up in the vicinity.

It is high time that our organization take some positive action by acquiring some of these vanishing habitats and see that they are preserved for posterity. Some other ornithological groups in other states are acquiring similar small plots of land and developing them as permanent sanctuaries for bird life. Please think this over and let us have some positive action before it is too late.

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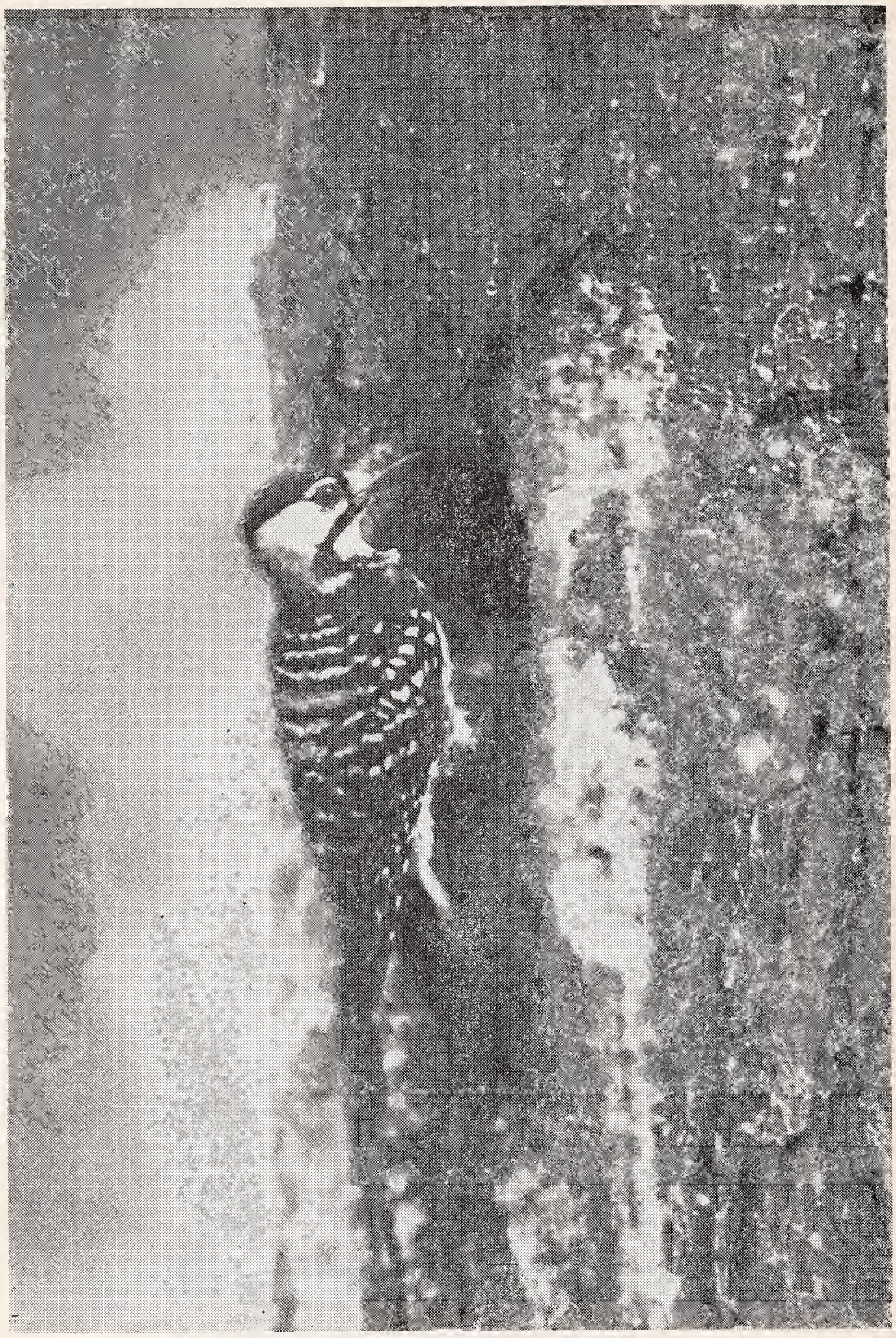

Red-cockaded Woodpecker at its Nest

Photo by Samuel A. Grimes

THE MIGRANT

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# THE RED-COCKADED WOODPECKER IN TENNESSEE

### By ALBERT F. GANIER

Recent observations on this woodpecker *(Dryobates borealis)* on the Cumberland Plateau near Crossville, by members of the Tennessee Ornithological Society, make it desirable that they be given in some detail. Since the bird is a rare resident in our State, I will also give all former records that are known to me. The species is distinctly a southern bird, being found chiefly in the pine-woods areas of the Carolinas and the Gulf states, ranging sparsely northwards into Tennessee, southeastern Kentucky, southern Missouri and eastern Oklahoma. Observers in the Gulf states report that these birds have greatly decreased in recent years, due to the cutting away of old stands of pine. Almost invariably the birds dig their nesting holes into the trunk of a living pine, usually an old one, the center of which has a decaying heart.

The site of the 1962 T. O. S. annual meeting was chosen partly because of the probability of finding this woodpecker on its nesting grounds and thus giving most members a chance to add a new bird to their life lists. Some also added for the first time the Ruffed Grouse and the Wild Turkey. On scouting the area in June, 1961, I was accompanied by Mr. Ralph Plumb, forester for the State-owned Catoosa Wildlife Area. This Area lies northeast of Crossville, comprises 80,000 acres of almost unbroken timber land and is threaded by the deep gorges of Obed River and Daddy's Creek. There are many deer and the Area is used chiefly by the State for regulated hunting. An old farmhouse and its clearing, called the Potter Farm, has been retained for the occasional use of management personnel. It was between this place and the Daddy's Creek bridge, some 5 miles eastward, that I found a fresh appearing nest-hole on June 9, 1961 and where in 1962, our T. O. S. group found at least three pair of the woodpeckers between 2 to 6 May, 1962.

The 1961 nest was in a live pine just 30 feet south of the roadside and the hole was 25 feet above the ground. Presumably the young had left for the old birds did not show up during a half hours wait. A description of this nest is here given for it will fit each of the others found later. During or on completion of the nest-hole in the live pine, the bird scales off the loose outer bark about halfway around the trunk and for as much as two feet above and below. It then pecks many holes thru this inner bark so as to cause the resin to run out and spread upon the previously prepared area. The tree then appears grayish white and glazed so that it can be distinguished at a distance from neighboring pines. Very few who have written about these birds have ventured to give a reason for the habit, but to me it is a clear case of seeking to prevent or discourage entry of other cavity-nesting birds, flying squirrels, deer mice, wood ants,

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beetles, bees and snakes. (A number of times, I have found snakes in trees from 20 to 30 feet up). The holes are said to be used over again for years, as long as the tree lives and can be induced to exude fresh resin or until one of the above mentioned tenants have moved in prior to the nesting season.

Our T. O. S. group of about a hundred observers spent Saturday, May 5, 1962, in the Catoosa Area, making headquarters at the Potter Farm and observing at many points along the road to beyond Daddy's Creek. Here were the most extensive stands of pines, some mixed with hardwoods and others pure stands. These were Virginia pine *(Pinus virginiana)* mostly under 30 years but some old ones still remained. Hemlocks grew along the streams.

We first examined the 1961 nest and found the bark fresh picked and resin running. No bird was seen here but one may have been sitting though pounding the tree with a rock failed to make a possible occupant show itself. A few days before, Plumb and I had found two holes along the road as it descended the hill into Daddy's Creek and these our group stopped to inspect. One of these holes had not been worked on this year and bees were observed going in and out of it. The other, appeared to have been worked on and some fresh resin was running. Vigorous pounding with a rock caused a flying squirrel to show his head but he did not leave. We then began an intensive search of the slope and succeeded during the day in finding three new nest holes nearby. While observing one of these, a Red-cockaded Woodpecker appeared and gave us opportunity to observe him at leisure. He kept chiefly in the pines but spent a couple of minutes in a post oak overhead. We noted that it resembled but was somewhat smaller than a Hairy Woodpecker, that it appeared slimmer and that the white cheek-patch was conspicuous, this mark affording a quick and sure means of identification.

One of the new nest holes was in a tall old pine which leaned over an abandoned road. This nest was about 50 feet above the ground and one of the woodpeckers was observed to go into the hole, remain a bit and then leave. After some further observation, we judged that incubation had not as yet begun. At one time or another, the birds were heard calling near the other two nests and there may have been two pairs in the vicinity for they are said to be not averse to nesting near each other. During the late afternoon, several of us drove back for more observations and to take photos. Dr. Herndon's camera was equipped with a 400 milimeter lens and he secured a picture of one of the birds on the tall pine about 5 feet above the nest hole. This photo is of special interest since it shows how the birds hold their bodies well out from the resin coated bark, using their stiff tails as a prop. Unfortunately, the photo was not sharp enough for reproduction. I have therefore secured as an illustration for this article, a photo of a Red-cockaded Woodpecker at its nest taken by Samuel A. Grimes of Jacksonville, Florida. We are indebted to Mr. Grimes, one of the Country's greatest bird photographers, for the use of this splendid picture.

During the day, two more locations were found by members. The first of these was of two birds observed along the road at a point 3.9 miles east of the Potter Farm gate. The other location was at the west side of the Potter clearing where one or more birds were heard in a grove of tall pines near the gate. We were by no means able to search all of the pine woods available and assume there were other pairs present. Pending further search, we do not know but that this is only a small and relatively isolated population.

I spent the week of 7-13 June at Harrison's lake near Crossville and on 9 June drove into the Catoosa Area to check on the above mentioned woodpeckers. I found that the 1961 nest had been taken over by Flickers. They had enlarged the entrance hole and had cleaned off all resin within six inches of the hole. I next visited the nest in "the tall old pine", where Dr. Herndon had photographed one of the birds at a new hole. Here, another Flicker had usurped the quarters and protruded his head from the hole for a moment before flying away. One of the other new holes, noted 5 May and 200 feet distant, was visited and from it flew a Red-cockaded Woodpecker. I watched this nest tree for the next forty minutes without seeing the owner return. This was a new nest and the birds had not taken time to peck the bark above or about the nest hole. It was only eighteen feet up. I am now inclined to think that there is only one pair on the Daddy's Creek slope.

Except for two western Tennessee localities, all records of these woodpeckers for the State are from the Cumberland Plateau and southeastward. These are briefly described below.

1.—The earliest record is from Rockwood, 20 miles S-E of the Catoosa locality, where W. H. Fox (**Auk,** 3:315-320) accords it, "Rare. Three seen April 10, 1884, two of which, a male and female, I collected. It was not met with again until April 22, 1885, when I shot a solitary male about six miles from where I had found the former ones." His specimens are in the U. S. National Museum. Incidentally, Fox's locality list of 114 species is the first such list ever published from Tennessee.

2.—S. N. Rhoads, who did miscellaneous collecting across the State in 1895, found them present at a location 25 miles N. of the Catoosa site (**Proc. Phila. Acad. Sci.,** 1895, pp463-501) and says, "This bird was found breeding on the Cumberland Plateau at Allardt and on the route from Allardt to Rugby, in Morgan and Scott counties. Two specimens were secured; I did not see it elsewhere. At Allardt, the nests were excavated at a height of 30 to 40 feet, in living pines. By June 8, the young were nearly fledged."

3.—In June, 1935, a group of T. O. S. members spent a week studying the birdlife of Pickett Forest Park and found these woodpeckers there. This site is 38 miles north of the Catoosa locality and just south of the Kentucky line. My annotated list (MIGRANT, **8**:24-29) says, "This woodpecker of the pine woods, rare as far north as Tennessee, was found at three points, in pine groves. There were several birds in each group and they usually made their presence known by their chattering conversation." One bird was also seen in the grove of large pines at York Institute, 2 miles north of Jamestown. On previous trips, the writer had searched for them without success about Jamestown and Allardt. In 1942. G. R. Mayfield visited Pickett and reported the birds still there. W. R. Spofford visited this park, the first week in June, 1946, and reported four nest holes near together, on one of which the resin was fresh. The following year, he found that an additional fresh nest hole had been added. He saw no birds during either year.

4.—Thirty-five miles N-E of Pickett Forest Park, on the Plateau and in Laurel county, Ky., R. M. Mengel found two groups of these birds near Rockcastle river in early July, 1939 (**Auk,** 57:424). He states that a loose flock of 6 or 7 was found in a small pine grove on 2 July and in another pine grove, 4 more were found 5 July. A specimen was collected and no more were found during a weeks stay. He writes, "On each occasion, the woodpeckers announced their presence by continually chattering as they foraged thru the pines."

5.—Sixty miles S-W of Catoosa, at Beersheba Springs in Grundy county which is also on the Plateau, Red-cockaded Woodpeckers were found by H. C. Fortner in 1921. Prof. Fortner wrote to me at that time that he had collected one there in December of that year but had not recorded it there during his summer visits. This is the only winter record for the State but it is believed to be a permanent resident. I spent a week at Beersheba, 21-25 May, 1922, assisted by Edgar McNish, and although we sought the species we did not find it.

6.—At the extreme S-W end of the Great Smokies National Park and along the highway 5 miles S-E of Calderwood, R. J. Fleetwood (MIGRANT, **7**:103) recorded two of these birds together, 17 April, 1935. He mentions their often recorded habit of feeding among the higher branches of the pines. During his year as Asst. Park Naturalist, he mentions finding another, several miles away at Cane Gap on 19 April and still another on 29 April on Andy McCully Ridge. Respective altitudes of these were 1700 and 2210 ft. S.L.; those on the Plateau are from 1800 to 2100. From these same pine-clad foothills of the Smokies, James E. Liles reported (Stupka, letter), three on 17 March, 1953.

7.—At Athens, Tenn., about 30 miles west of Fleetwoods locale, Richard Gettys found a nest in 1901 (MIGRANT, **5**:1-4). This record states that, "One nest was found of this species, May 3, 1901, containing young. Cavity pecked in branch of a living oak, 40 feet up." Although there was plenty of pine woods about Athens, it will be noted that this nest was not in a pine. Gettys specialized in birds nesting from 1897 until a year before his death in 1910. He made record of hundreds of nests and the fact that only one nest of this species was found shows that it was rare there.

8.—Next, we take up the elusive trail and go 50 miles S-W to the fine old stand of pines in the Chickamauga National Military Park. This is in Georgia, adjoining the Tennessee line just below Chattanooga. Here, way back in 1894, Bradford Torrey (MIGRANT, **7**:35) records having found them on Snodgrass Hill, but only 2 or 3 birds. The writer searched for it there in the 1920s without success. When Eugene and Adele West took up residence in Chattanooga they renewed the search and finally were enabled to announce (MIGRANT, **26**:19) that on 30 June, 1954, Mrs. West had found a family of 4 in Chickamauga and 3 in the same place on 2 December. Rock Comstock reported 3 there on 20 June, 1960; the Chattanooga spring census included 2 on 30 April, 1961 and the Christmas census listed 2 on 31 Dec. 1961. So far, none of these Georgia birds have been found to stray over the line into Tennessee.

9.—There is an isolated West Tennessee record mentioned by Dr. Alex. Wetmore (U. S. N. M. Pub. 3050, p 198) of which he says "Perrygo recorded one of these birds near the Cumberland river, 7 miles north of Dover, on Oct. 30, 1937, but did not collect it." There is little or no pine near Dover so this was probably a wandering individual from further south. Perrygo was one of a museum collecting expedition and the fact that they spent 22 weeks within the State, during the spring and fall, and saw only this one individual, attests the rarity of the species. The party did not visit any of the exact localities mentioned in this paper.

10.—We finally go southward to the Tennessee line where it borders northeast Mississippi, an area where there still exists some remnants of the former heavy stands of pine. Andrew Allison had found these birds near the Tennessee river and a few miles south of the Tennessee line in 1904 (**Auk,** 24:12-25) and rated them "Fairly common; very noisy and not likely to be overlooked when present." Hoping to find these woodpeckers on our side of the State line, G. R. Mayfield and the writer in 1931, spent 6 and 7 September there. We searched over many tracts of pine but were unsuccessful. In 1939 and 1940, Ben B. Coffey sought to find it in Allison's localities and after considerable search, found one several miles south of the line (MIGRANT, **18**:8). Finally, Dr. Cynthia C. Counce succeeded in finding one a few miles within Tennessee (MIGRANT, **17**:13), "on March 31, 1946, in a mixed stand of pines and hardwoods, on the hill at the rear of old Red Sulphur Springs."

11.—Thirty miles west of the last mentioned locality, John B. Calhoun found a few Red-cockaded Woodpeckers in 1939, in a stand of old pines about 5 miles N-E of Pocahontas, in McNairy county, Tenn. (**Jour. Tenn. Acad. Sci.,** 16:293-309). This site is 7 miles north of the State line. Calhoun was ornithologist of a party sent out by the State Game and Fish Dept., to make a wildlife survey of the area and the party was afield from 17 June to 9 September. His notes are illuminating and are here quoted in full. "The writer searched in vain for nearly a month and a half, thru several thousand acres of short-leaf pine *(Pinus echinata)* without being able to find a Red-cockaded Woodpecker in McNairy county where it might be expected to be found. Finally, on July 31, the writer's efforts were rewarded as two called noisily and flew past him as he approached a patch of pines on one of the highest ridges in West Tenn., a ridge which lies five miles northeast of Pocahontas and just north of a power line. The region inhabited by these birds is a strip of virgin pine about a mile and a half long and a quarter mile wide at its widest point. It was in this large timber that two nest holes were found in live trees; the opening to each appeared rectangular. One of the trees was heavily gummed up with resin for several feet above and below the hole. One pair of these birds, that were heard calling softly in the top of a large pine tree, moved around so little that it took the writer fifteen minutes to locate them. At one spot adjoining the virgin pine forest there was a small patch of young pines killed by fire which was a favorite feeding spot for them. Here, on July 31, two adults and two immature birds were seen noisily chasing each other. John Pond (of our party) described their call as that of the Crested Flycatcher, without the nasal twang. Two were again seen in this patch on August 10. They fed indiscriminately in the beetle ridden dead pines and in the adjoining oak woods. The only other locality where Red-cockaded Woodpeckers were found was at Pine Top in adjoining Hardeman county where Pond saw one on August 6. Dates of recording were, July 31 (6); August 6(1); 10(2); 11(2); total 11 (some may have been seen on two different dates)." Four specimens were collected by Calhoun and these are now in my collection. On 17 and 18 June, 1942, Alfred Clebsch and I visited the site, hoping to find some of these easily overlooked birds but failed to find them (MIGRANT, **13**:32-35). Mr. Coffey writes me that in later years, he and others with him stopped off at this pine woods area 16 or more times to search for the woodpeckers, finding them on 5 dates as follows: July 6, 1947 (4); March 12, 1950 (4); March 8, 1953 (1); March 14, 1954 (4) and March 30, 1958 (1). His birds were in the Ben Carr pines along highway No. 57, this location being about 3 miles south of Calhoun's site.

This brings to a close about all we know of the past and present occurrence of these attractive little woodpeckers in Tennessee. We have kept in mind its possible occurrence elsewhere with but little success. Hope of finding them in other likely places has served as a lure to draw us into arduous trips and excursions to many "wild and wooly" places. The comments I have quoted from the several observers mentioned should assist and encourage others to search in new as well as old locations. If it were possible to make an exhaustive search thru all of the limited pine woods areas in the State, no doubt more individuals would be found; on the other hand, there are many who believe the Red-cockaded Woodpecker is destined to become a vanishing species, to be gone along with the former vast southern pine forests which filled their special requirements.

2112 Woodlawn Dr., Nashville 12, Tenn. May 25, 1962.

## OBSERVATIONS OF AN UNUSUAL NESTING AT NASHVILLE

**By HENRY E. PARMER**

While visiting Bush farm on 1 Nov. 1961 the writer saw a large white goose fly in from the river to the lake. On succeeding days he was able to get quite close to it by car. A vague guess by him was that it might be a cross between a Snow Goose and some barn yard goose. She (as later proved) was a large goose and snow white, with the following exceptions. There was a medium gray spot on the cheek over the ear and a small gray spot on the side. When forced to fly the rump showed gray, and there was no black on the wing-tips. The upper mandible was reddish orange and the legs and feet were orange.

On 10 Nov. an immature Blue Goose came to the lake. According to plumage, by Kortright, it had to be a bird of that summer, 1961. It was much smaller than the white, probably half the weight of the female. Within a day or two they "took up" with each other and were rarely seen over 2 to 6 ft. apart. Generally they were on the lake with other waterfowl, but occasionally were seen browsing in the fields where corn had been harvested. Even when the lake was frozen over they stayed, sitting on the ice with a few ducks and coots. When bitter cold weather came Joe Bush started shelling corn for them. Within a very few days they learned to come to the office yard when Joe called "Here-er White-ey".

In late Feb. the Blue goose seemed to decide it was time to leave. On two trips he (as it was later assumed to be) was seen to fly wide circles around the lake, then dive low over the female, calling loudly. She seemed entirely indifferent, so they stayed through the spring.

There is an island in the lake, about 30 feet in diameter, that has some small trees and low weeds. On 22 April a fisherman found a nest there containing two large white eggs. These he removed and carried to the lake office. The writer saw them the next day and thought it best not to attempt to replace them. For the next few days she was seen on the nest for a while each morning. On 27 April a visit showed 4 more eggs in the nest and that afternoon she began to set.

As the writer knows almost nothing of geese, many questions began to arise. Some crosses are fertile, some not. Could this pair be? Was the Blue old enough to breed? Seemed highly doubtful as he couldn't have been over 10 or 11 months old. Kortright says "geese usually breed in their third year" and other accounts vary in saying they must be either two or three years old to breed. Did copulation take place? Would he remain and help raise the goslings if they hatched? This question was answered shortly as five days after she started setting he took off late in the afternoon, circled the lake several times while calling, then flew straight into the setting sun. In March and April his plumage had changed considerably. When he left he seemed about halfway between juvenile and adult plumage. It is presumed that geese mate for life. What does his leaving mean? That they were not mated? Or could it be that he was a she? The next question that arose was how long would it take the eggs to hatch if fertile? A little digging into books dug up only a lot of confusion. Estimates found ran all the way from 22 to 40 days.

For about 25 days she was completely in the open under a very hot sun. Then weeds began to grow, giving her some shade. On the 40th day, 6 June, we were ready to give up, but not her!

On that morning a most interesting thing happened. Mrs. Grace Englert was fishing at the lake and heard the story of the nesting. She thought such devoted effort should be rewarded, and decided to find some very young goslings for her. The writer believed this impossible as geese are scarce in our area, and what were the odds on finding very young goslings on any one particular day? To his amazement Mrs. Englert returned a few hours later with three tiny balls of yellow, just three days old. They were taken out to the island and the goose allowed them to be placed under her. Instantly they popped out like corks from a champagne bottle and took off down a musk rat hole. And what a job it was to get them out again! This was finally accomplished and the goose and young were taken by boat to the yard behind the lake office and placed in a poultry cage. Once caged they soon accepted each other. The goose was as proud of them as could be and would put up a terrific defensive show if one approached too close to the cage. She wasn't too happy about it though, as she constantly paced back and forth like a caged animal. A trip was made back to the island and the eggs collected. When broken they showed that they had been infertile.

After 48 hours the family was released. She immediately waddled to the lake, three in file behind, and swam back to the island. Two hours later she had them out in a field of two foot corn. Within about two days she brought them back to the office no doubt for her meal of shelled corn. And of course some joker had to run one of the young down and catch it. When released she took them off into the high corn fields and very little was seen of the family for about six weeks. About 23 July she brought them again to the office. They seemed about the size of the Blue and were snow white, with orange bills and legs. They were quite a devoted family, often actually brushing against each other, both in the water and as they fed.

# THE SEASON

MEMPHIS AREA.—Benj. R. Warriner reports Evening Grosbeaks present in Corinth, Miss., about ten days when he verified identification of 8 near his home, Mar. 15.

Following our first Golden Plovers (135, Booker, Ark., Mar. 11), we found flocks totaling 514 in the Booker area and 12 near Crawfordsville, Mar. 18, and 40 near Jericho and 50 near Booker, Mar. 25. On Mar. 17 we saw 25 at our Penal Farm. On Apr. 1, we saw 50, 40, and 6 just north of Covington, Tenn., and 100 on the old air base at Halls. Mrs. Frank T. Markham and Mrs. Mike Sumara had large groups (to over 400) on 8 dates from Apr. 3 to Apr. 18 with a few on Apr. 22, in the Tiptonville area (to Cate Landing, N & S of the ferry, and W of Ridgely). Meanwhile they recorded 8 Dowitchers (sp?), Apr. 16, W of Ridgely, and 5 more, Apr. 17, N of Tiptonville. The plover areas were not visited after Apr. 22. Flocks of 40 and 50 Goldens were below Lakeview, Miss., Mar. 31, and on the levee nearby were 16 Upland Plovers, now uncommonly seen in our area.

A Barn Swallow was seen at Halls airbase, Apr. 1. Records of Oliver Irwin for Memphis parks show migration about as usual; of an uncommon transient species, the Lark Sparrow, he reported two in Overton Park, Apr. 12 & 14. The Pine Siskins remained there until mid-May (0I).

At the Dyersburg heronry, June 30, the trees were full of immatures; many adults were still feeding young. An estimate: 3,000 Little Blue Herons, over 20 Common Egrets and over 20 Snowy Egrets (latter difficult to pick up).

On July 1 (BCs, Alice Smith, Jean Markham, Betty Sumara), a Black Tern and 50 Bank Swallows were seen at Cate Landing; no swallow holes found nearby. Two newly noted Cliff Swallow colonies were: US 72 highway, Bear Creek bridge, Ala., 10 birds, May 12 (25 near Colbert Steam plant—an old site); and (Dinkelspiels), June 12, 100 birds at Moccasin Creek bridge (old nests present), Ark. 5 highway (Baxter-Izzard County Line). The Broad-winged Hawk was not seen as often as expected and the Yellow-throated Warbler was rarely heard. The House Wren was again found 1½ miles N of Tiptonville ferry (2 singing) plus a third singer 5 miles north, July 1, Bewick's Wrens were singing in and near Kosciusko (3) and Goodman (1), Miss., June 3 (BCs) A male Blue Grosbeak was seen in Whitehaven, June 9 (Lydel Sims et al) and, Germantown Rd. and Wolf River, June 17 (BCs). On June 27 a Lark Sparrow was seen at the levee, north of the Helena highway, Coahoma County, Miss. (LC, HD).

Late August evening flights of Nighthawks (to 50) seen near Coffey Grounds (LC) and Sear's (AS); also E of Henderson, Tenn., 57 in 15 minutes, Aug. 26 (Mrs. Ed Carpenter).

BEN B. COFFEY, JR.

NASHVILLE.—For most observers in the Nashville area, 1962 Spring Migration was one of the most disappointing in memory. Those who happened to get out April 22 were well rewarded but that was the best day. Although 135 species were tallied on our Spring Big Day, 28 April, (which is more than we have some years, last year we had 159) there were fewer birds. For instance only 3 Rose-breasted Grosbeaks were found as compared with 40 on 4-29-61, 20 Orchard Orioles, last year 74, 1 Baltimore, last year 12. Most migrating warblers were seen, but also in fewer numbers. First dates on warblers were from one to three weeks later than normal arrival dates. Not one Golden-winged, Orange-crowned, Canada or Wilson's, was reported for the season.

Some ducks stayed around later than usual: 1 Gr-winged Teal 5-8, 1 Canvasback 4-28, 1 Greater Scaup 4-13, 4 Bufflehead 4-23, 1 Old-squaw 3-23, all at Bush Lake by HEP. and 1 Common Merganser 4-18 at Coleman's Lake, LOT. 4-17 is a late date for the Brown Creeper HCM.

One interesting fact of the summer is that we had more reports of Blue Grosbeaks than ever before. Some of these reports will be printed in more detail in THE MIGRANT in this or later issue. Casual reports of nesting Bluebirds seem to indicate some improvement in the breeding of this specie.

A Black-billed Cuckoo on 21 July is an unusual record KAG; KAG also reports 1 Canada Warbler 8-26; 1 Upland Plover was heard in migration the night of 8-27. HCM.

The beginning of fall migration was heralded as usual by a few shore birds: 8-28 & 8-30, 1 Golden Plover, HEP; first Aug. record); 7-12, 1 Spotted Sandpiper (earliest since 1926) HEP; 7-26, 1 Solitary Sandpiper HCM; 8-23, 2 Greater Yellowlegs and 1 Lesser, LOT; 7-28, 1 Pectoral Sandpiper HCM, HEP; 8-17, 3 Least Sandpipers LOT; 9-5, 3 Stilt Sandpipers, 1 Dowitcher, 1 Semi-palmated Plover, 2 Semi-palmated Sandpipers, 6 Least Sandpipers, 1 Baird's Sandpiper (third Middle Tenn. record) all by HEP & WH.

The first sign of substantial migration of warblers was accompanied by tragedy on the night of 6 September, when a cold front with heavy clouds was ushered in, causing conditions which mean possible destruction for migrating birds. 135 birds of 21 varieties were picked up beneath WSM TV tower, including 15 species of warblers. This incident will probably be reported in more detail in a later issue of THE MIGRANT.

As we write this Seasonal Report, Sept. 13, very few records of live migrating warblers have been received, and not any of particular note. Recent rains have improved conditions generally, so we are hoping for a good fall count September 22.

MRS. WILLIAM BELL, 1617 Harding Place, Nashville 12.

COLUMBIA.—On the morning of our Spring Field Day, May 3, 1962, at about 9:00 a. m. Mrs. William Fuqua spotted three small egrets with flesh colored feathers and head. These were in a field inhabited by cattle more than 100 yards from a large pond, about 3 mi. SW of Columbia. Mrs. Fuqua subsequently identified the birds in my Peterson's "Birds of Europe" and better still, about a month later saw large numbers of Cattle Egrets in Florida for comparison. She feels quite positive about their identification, but the birds were gone before others of us could share her unusual find.

Yellow-crowned Night Heron (one pair) raised two young to maturity in the swamp above Arrow Lake near Mt. Pleasant and the American Bittern was seen regularly there from mid-April until early May. A Virginia Rail was found there by me March 24 and a Sora on our field day May 2-3. For about one week until May 3 up to eight Evening Grosbeaks were occasionally seen in a shady farmyard just north of Mt. Pleasant. Horned Larks were occasionally found in June and July on the airports at Mt. Pleasant and even Pulaski near the Alabama line at low elevation (about 500 ft.).

On August 26 about 1,000 Bank Swallows mixed with a few Barn Swallows were observed on wires over large fields overlooking south shores of Old Hickory Lake.

GEORGE R. MAYFIELD, JR., Columbia.

COOKEVILLE.—Weatherwise we claim no great distinctions or differences. Drouth has been with us through most of August and the first half of September.

It may be that Red-headed Woodpeckers are coming back into this area. Twice they have been sighted on the Tech campus since July. During the first half of the summer the calls of Yellow-billed Cuckoos were quite common in our part of Cookeville. Any one who gets more than a fleeting glance of them here is lucky.

L. P. HOLLISTER, Cookeville.

KNOXVILLE.—Thousands of Purple Martins congregated to roost in the Cherokee Boulevard section of Knoxville in early August, where they were watched by Mrs. R. A. Monroe. This happens every summer but this year they were more numerous than in the past few years. The greatest numbers were present during the first two weeks in August and by the 19th most of them had gone.

An adult Little Blue Heron was seen by J. C. Howell on Norris Lake on July 26. Such herons and egrets have been very scarce here this summer, as they have been in the past few summers compared with longer ago. Also on Norris Lake and seen by J. C. Howell were one or more adult Bald Eagles seen on the following dates: July 22, August 17 and 24.

The usually early warbler migrants have been seen, altho a Chestnut-sided Warbler seen by Mrs. Monroe on July 31 was very early. The early warblers are all species that nest in the Great Smoky Mountains, which suggests that the birds are coming from there rather than from the north.

Some unidentified terns, very early, were seen in late July on Loudon Lake. Other tern reports, which came from Norris Lake are: 2 Black Terns on August 17, 20 of the same on August 26, and 10 Common Terns on Sept. 8.

Birds which probably are regular migrants but which are usually overlooked are a singing Whip-poor-will on Sept. 8, and a few Solitary Vireos and Baltimore Orioles on Sept. 10.

JAMES T. TANNER.

KINGSPORT.—Our last report was written the middle of March when the Canada Geese were belatedly flying north. The next week brought increased observations of water birds including Coot, Baldpate, Blue-winged Teal, Wood Duck, Redhead, Canvasback and a pair of Shovelers, our third record. The winter had not been notable for water birds; we had no records of Red-throated Loons or Black Ducks and a scarcity of American Golden-eye. But by the end of March we had seen at least a few of all the other usual ducks, including Pintail and Hooded Mergansers. The temperature warmed to 73°, and by April 1 all ducks were gone from the lakes. After a snow and heavy frost we again had a few stragglers.

During the winter we saw no hawks but recorded some by the third week in April. April was cool with heavy rainfall. Migration proceeded in a fairly normal pattern. The third week in April brought all the swallows: Tree, Barn, Rough-winged and Bank; as well as Osprey and Common Loons not usually seen so late. But the bird that attracted the most local attention during April was the Evening Grosbeak. Mrs. W. C. McHorris reported these on April 24; on April 25 and the following week the Finucanes saw several. The last date Grosbeaks were seen in town was May 1, but Thomas Finucane saw ten on Bays Mountain May 3.

May proved humid and hot with record high temperatures of over 90 and little rain. Noticeably scarce or absent during the summer were Black Vultures, Bewick's Wrens, Vesper Sparrows and Bachman's Sparrows.

We begin to hope the Red-headed Woodpecker is increasing. Observations indicate several areas where they are now nesting. Perhaps also Ruffed Grouse are more numerous. Two species of warblers not usual with us in the summer appeared frequently in the records after spring migration was over. During June and early July Thomas Finucane reported Redstarts from five locations on Bays Mountain and Prothonotary Warblers along Holston River. The latest date for Prothonotaries was July 15, seen by the Arthur Smiths.

The only unusual record for deep summer was a Woodcock (last recorded June 10, 1958) seen by Mr. and Mrs. Arthur Smith on July 15 along the Holston River.

By the first of August population shifts were again apparent. Purple Martins left the second week with Aug. 10 the last date. On August 11 Blue-winged Teal were back; by the eighteenth Semi-palmated Plover and Semi-palmated Sandpipers appeared at the fish hatchery.

Two observations of local interest were made by my son and me August 18th and 19th. At the new local fish hatchery we saw a pair of Blue Grosbeaks feeding young nestlings. Since Aug. 17, 1958, when the Arthur Smiths saw a pair of Blue Grosbeaks with an immature at the old fish hatchery we have wondered about the possibility of this species nesting here. Now it is definitely established. On the 19th we saw a Barn Owl. It flew into beech trees on a steep hillside above a riding stable where there is a plentiful supply of rats and mice. Later in the week I heard the peculiar cry of this owl as it moved up and down the valley around the stable. Our last observation of a Barn Owl was the third week of Sept., 1954 by Thomas Finucane.

The fall migration dates for warblers and vireos seem about as usual, but greater numbers and a greater number of species have been reported. Arthur and Elizabeth Smith furnished the following calendar: Aug. 20, Canada, Blackburnian, Chestnut-sided Warblers; Aug. 26, Yellow-throated Vireo; Aug. 27, Magnolia, Cape May, Pine Warbler; Sept. 2, Bay-breasted, Blue-winged and Sycamore; Sept. 3, Philadelphia Vireo; Sept. 4, Prairie Warbler and Baltimore Oriole; Sept. 6, Golden-winged and Tennessee Warblers.

As usual, observations of hawks will occupy most of our time during September. Tommy Finucane saw three Broadwings over Bays Mountain the second week in August. Occasional hawks have been spotted here in September, but no flights by the tenth.

ANN SWITZER, 1620 Fairidge Place, Kingsport.

ELIZABETHTON.—Spring arrived rather abruptly and without the usual cold snap early in May. This gave us a rather poor migration with almost no real concentration of migrants. The summer was about average which should have afforded favorable breeding conditions for most species. The late summer was perhaps warmer than normal although the maximum official temperature for the area was 93° and the late summer was very dry with practically no rainfall for almost a month during late August and early September.

Some rather unusual summer records for the area will be evident from the following notes. The late summer heron flight was very poor with only two Little Blue Herons reported from the Roan Creek area 8-4. A Yellow-crowned Night Heron (ED) remained in the shoal below the "Morrell Hole" in the Watauga River several days and was last reported 8-26. White Ibis (4) 7-29 at a small lake on the Veterans' Administration grounds in Johnson City were soon reduced to one which was seen by several observers and last reported 9-12 (RLJ). A Mallard at Wagner's Island in the Watauga River 8-18 (CS, LRH) was very early. Blue-winged Teal (5) 9-3 (CS, KD) were late. Spotted Sandpipers were absent from the area between 5-17 and 8-13. Other shore bird observations at Roan Creek were: Pectoral Sandpiper (1) 9-8; Least Sandpiper (4) 8-25 to 9-8; Semipalmated Sandpiper 8-25, (12) 9-1 and (5) 9-8 and Dowitcher (1) 8-19 to 8-25 (KD et al). Common Tern (1) 8-5; Barn Owl 6-5 (WC) and 9-2 (KC, LRH) in Shady Valley. The Chuck-will's-widow (see THE MIGRANT **33**, 35-36, 1962) continued to sing on the shore of Watauga Lake well into June (CW). A Whip-poor-will sang several times during the evening of 9-11 near the foot of Holston Mountain (LRH). A pair of Red-headed Woodpeckers appeared at the feeder 4-29 (Mrs. BK) in the vicinity of the Elizabethton golf course. On July 26 they were observed eating sunflower seed. On August 1 an adult was seen feeding an immature sunflower seed. On August 12 an immature was seen eating cracked corn. On August 20 an adult was accompanied by two immatures and three immatures were present on August 23. They were still patronizing the feeder at the end of the period. A Yellow-bellied Flycatcher 9-3 (N&B). Traill's Flycatchers were present at the county farm 5-9 to 9-15. It is not known if they nested there this year as no nest was found and the usual breeding area was restricted by industrial construction in progress in the area. They were present in Shady Valley during the breeding season although no nest was found. Least Flycatcher 9-8 (N&B). Bank Swallows (10) 8-5; Barn Swallow (4) 9-2 Shady Valley (KC, LRH); Cliff Swallows 8-19. Swainson's Thrush (6) 9-8 and Gray-cheeked Thrush (1) 9-9 (N&B). Bluebirds are still scarce but can be found in certain areas regularly. Shrike (1) 9-9; Worm-eating and Golden-winged Warbler 9-8 (N&B). Tennessee Warbler (1) 8-26 at 5,700 ft. (FWB), none reported at lower elevation, 1,500 ft. to 9-15. Bay-breasted Warbler 9-15 (N&B). Northern Waterthrush (1) 8-8 and (7) 9-15 (N&B) appear to be more numerous than previously. Wilson's Warbler 9-15 (N&B). Bobolinks found nesting in Shady Valley in June (KD). First migrants 9-3. Rose-breasted Grosbeak 9-8 (N&B).

Contributors: Kenneth Clark, Wallace Coffey, Ed Davidson, R. L. James, Kenneth Dubke, Lee R. Herndon, Mrs. Basil King, Clarence Raulston and Charley Smith. N&B—netted and banded.

LEE R. HERNDON.

33(3)

# ROUND TABLE NOTES

BLUE GROSBEAK IN NASHVILLE.—During the morning of May 26, I heard an unusual bird song in our yard — one which sounded somewhat like an Indigo Bunting, but so different that I investigated. I saw the bird, but not as well as I did that afternoon when it returned and spent about twenty minutes in a locust tree fifteen feet from my window. It was observed in full sunlight, and I was able to study the heavy bill and rusty wingbars. I was convinced it was a male Blue Grosbeak.

For the following two weeks the bird could be heard every morning from about six until ten-thirty and at intervals during the day. My neighbors, Dr. and Mrs. O. C. Ault watched it with me several times, as it sang or hopped around in the locusts, picking insects from the leaves. Sometimes it would spend as long as fifteen minutes in each tree.

It followed quite a definite pattern as to territory, for after leaving the thicket between our houses, it would fly across the road where there are fields and hedgerows. We followed it twice, but were unable to locate a nest. We never saw a female.

June 14 to 16 the Blue Grosbeak appeared briefly during the early hours of the morning, following the same route but spending only a few minutes in each tree, and keeping constantly on the move. Through field glasses we watched it catching insects and wiping its bill on branches, but did not see it carrying food away. On 18 June after two days absence, it returned for a short visit, and I heard it over toward the field occasionally during the day. The song and visits grew less frequent, and we have neither seen or heard it since 25 June.

MRS. RALPH FAITOUTE, 4310 Scenic Drive, Nashville

RARE SHOREBIRDS AT NASHVILLE.—Coleman's lake is something like 10 acres in area, and is near the west bank of the Cumberland river approximately one mile below Old Hickory dam. On 6 Sept. 1962 Will Hon and the writer visited the lake in search of shorebirds. Twelve species were found, three being rare to the Nashville area. Species there were: Semipalmated Plover, one; Killdeer, 20; Spotted Sandpiper, two; Solitary Sandpiper, two; Greater Yellowlegs, two; Lesser Yellowlegs, four; Pectoral Sandpiper, six; Baird's Sandpiper, one. This is our third Middle Tenn. record. Least Sandpiper, six; Dowitcher, one (species unknown). We have only 8 to 10 records since 1954 and these birds were almost unknown here before that time. Stilt Sandpiper, three. Our fifth record here. Semipalmated Sandpiper two. All these birds were actively feeding and often passed within a few inches of each other. This gave the writer a wonderful opportunity to compare sizes of well known birds to those that were rare to him.

HENRY E. PARMER, 3800 Richland Ave., Nashville 5.

SNAKES AS CLIMBERS.—The ability of snakes to climb is difficult to understand until it is explained that the belly scales are hinged to the body on the side next to the reptile's head and that the rear side can be moved outward to grip (like a claw) the bark or other rough surface. To climb a smooth sapling of small diameter, or post supporting a Bluebird box, the snake needs only to constrict an upper coil about the sapling while pulling up a lower section to hold, thus enabling a "push-up" of its upper coil.

An interesting incident of a 5 foot Grey Rat Snake climbing a Martin pole and capturing young Purple Martins *(Progne subis)* from suspended gourds, is described by Milton Hopkins, Jr., in Georgia's **The Oriole** for June, 1962. The pole was 3 inches in diameter, of cypress with the bark removed, and the gourds were suspended from cross-arms 20 feet up. The snake was found to have draped himself on a cross-arm when first perceived but entered a gourd when disturbed. Being a good ornithologist, Hopkins took a seat to let nature take its course and 35 minutes later, observed the predator to emerge and descend the pole. It was captured for confinement and observation. One of two large lumps in its belly was later regurgitated and proved to be a young Martin, nearly ready to fly.

In THE MIGRANT for June, 1936, (7:29-30, illust. 41), I described a group of nests of Cliff Swallows *(Petrochelidon pyrrhonota)*, affixed to the flat underside of a limestone ledge that projected outward over the Tennessee river, 10 feet below. As my companion, S. A. Weakley, and I watched from a boat below, we were surprised to see a small dark colored snake protrude a foot of its body from one of the mud nests. The parent swallows were feeding young meanwhile in adjacent nests. I pushed off the nest, snake and all and it was swept on by the current. We then scanned the possible approaches the snake could have used to reach the nest and found none that seemed usable. Evidently, here was a case where the belly scales were made use of in a manner that seemed hardly possible.

ALBERT F. GANIER, Nashville 12, Tenn.

A SNAKE AFTER YOUNG SWIFT.—Each year one or more pair of Chimney Swift build their nest in the chimney of the authors summer camp that is 20 miles west of Nashville. In the late spring of 1960 one nest was built.

The previous spring he had put up a bird box on a large Hackberry tree that was 10 feet from the front porch door. Starlings soon built in it, but one disappeared and the other soon left. Almost immediately a Gray Rat Snake over four feet long accepted the box as its home. Often it could be seen with a small loop out the entrance hole and its head resting on the loop. His wife wanted the snake disposed of, but his children said "you can't kill it. You have always told us that non poisonous snakes are beneficial, so leave it alone". So there it stayed during the summer of 1959 and part of the summer of 1960. An important point the author hadn't noticed was that one limb of the tree arched over the roof with a small branch that dropped to within a foot of the chimney.

On a beautiful afternoon in early June, 1960, the women folk called excitedly "there's something in the chimney after your birds". He came immediately and looked up the chimney. There was a large snake pressing against all four sides of the chimney. Its body was across the nest so that the head extended six inches past. He quickly loaded a .22 target pistol and poked it up the chimney. It was too dark to see the sights but he fired anyway, and instantly jumped out of the fireplace, having expected the snake to fall across his shoulders. Nothing happened. Next he called for a bright spot light. With the aid of this a well aimed shot was gotten off and the snake flinched. As the authors involuntary muscles were faster than his thinking, once again he was out of the fire place in a fraction of a second. Again the snake did not fall. Within two or three seconds he put the light back in the chimney and examined it thoroughly. There was no sign of the snake. Immediately he ran out in the yard, placed a ladder against the porch roof and climbed. Nothing could be found on the roof. Then he placed the ladder against the chimney, climbed to the top and examined the inside with the light. No snake. One young swift nearly old enough to fly was on the nest with two adults flying nearby. He assumed that the snake had found a brick joint missing and had escaped into the attic. The snake was not seen again for nearly a month.

On the following July 4th, a visiting nephew called from the river, about 100 feet from the cabin. "Uncle H. E., come see the big snake I've killed". The writer ran down the steps and there, being held up by a boat paddle, was a Gray Rat Snake 54 inches long. Examination showed a neatly healed wound about midway of its body. The bullet had just missed the spine.

In May young birds were missing prematurely from the nest of two pairs of Bluebirds and from Cardinal's and Prothonotary Warblers nest, all nearby. Maybe non poisonous snakes are not so innocent.

HENRY E. PARMER, 3800 Richland Ave., Nashville 5.

ROUGH-LEGGED HAWKS AT COVE LAKE STATE PARK.—Mrs. Earl Olson, Mrs. Al Foster and the writer spent February 13, 1962, at Cove Lake observing wintering ducks and geese. Sack lunches and thermos bottles were the order of the day so that every precious minute could be spent at lakeside. In addition to the waterfowl, the watchers saw four birds, which, at first sighting, were thought to be Red-tailed Hawks. However, as the hawks soared and wheeled they showed distinctive black "thumb prints" at the base of the primaries, and fully feathered tarsi.

Field marks were studied while the birds were in the air and while they were perched in trees. In addition, the "song" was matched with the Field Guide recording immediately upon returning home. The hawks were seen first at twelve o'clock and were still present at two-thirty when the observers had to leave the lake to resume less-exciting activities.

MAXIE SWINDELL.

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HYBRID PHEASANT RELEASE LAWRENCEBURG.—Seven hundred hybrid pheasant were released in Lawrence County on the morning of September 6th.

The release site was selected by Joe Hardy, Biologist for the State Game and Fish Commission, and Dr. Gardiner Bump with the U. S. Fish and Wildlife Service.

These pheasant were developed at the Buffalo Springs Game Farm from brood stock selected by Doctor Bump, who is in charge of the introduction of foreign game birds for the U. S. Fish and Wildlife Service. The doctor personally selected the brood stock in Asia for the project. This hybrid is an attempt to find and develop a new breed of pheasant adaptable to the conditions existing in the Southern United States.

**These birds are not being released to be hunted or killed in any manner.**

TENNESSEE GAME AND FISH COMMISSION.

FURTHER NOTES FROM CROSSVILLE.—The spring count from the Crossville area made during our annual meeting there 4-6 May and published in June issue, included three pairs of Spotted Sandpipers on Harrison's lake. We wondered at the time as to the possibility that these birds might remain to breed. There were other possibilities about the lake so I made it convenient to spend a week there 7-13 June, to investigate. I found that the only stretch of the lake's 15 mile shoreline that was sufficiently grass-free to be acceptable to the Sandpipers was a mile stretch around the golf course and a short stretch near the dam. These stretches were gone over carefully on two occasions and no Sandpipers were found. To investigate the possibility that Coots and Blue-winged Teal might have remained to nest, I followed the long shoreline one day with a boat equipped with out-board motor and found neither species. At a small creek emptying into the south side, I flushed a Wood Duck which made calls indicating that young were nearby. One of the most gratifying observations made was of the large number of breeding pairs of Red-headed Woodpeckers. There were 8 or 10 pairs nesting among the trees in and around the golf course and many others were to be seen in the surrounding woods.

ALBERT F. GANIER, Nashville 12, Tenn.

MID-SOUTH WHIP-POOR-WILL DISTRIBUTION RUNS - 1962.—Several Whip-poor-will runs revealed no increase, — New Albany to Tishomingo SP (none), Miss., May 11-12, S of Paris and later W of McKenzie (one each area), Tenn., May 12-13. A decided increase Ravenden to Ravenden Springs to the Eleven Point River, Ark., a. m. June 24. Several on ridge highway (newly worked) S of Heber Springs, Ark., June 22-23 (BCs) but none SW and SE. One, June 8, elevation 350 feet and down, E of Macon, Tenn. and only 24 miles E of Memphis city limits. Reports for Shelby County by B. B. Cooper, a very competent observer, last summer and this, not yet verified. Always on most ridges (500 feet) near Hickory Flat, Miss., one in town (400 feet) last summer (Cleo Yancey, BBC) and this summer plus a 2d (BC). After running most of the fire tower roads in the Ouachitas (1200-2800 feet) the last 6 years, only two pockets of Whips and a single were located; incidental thereto, previously, a single at Jessieville, 700 feet, and another at Lonsdale, 450 feet elevation and the farthest south. It came as a surprise, May 25-26, to find 3 singles W of Perryville (380 feet) and two E of Fourche Jct. (500 feet); in between, clouds may have stopped the Whips calling (but not the Chucks). A re-check June 9-10 (one Whip near dusk, SW escarpment of Petit Jean S.P. Mtn.) gave inclusive negative data E from Casa and W from Perryville. On a second of two re-runs before dawn, June 10, the one was heard at Fourche Jct., and W on Ark. 7 in Yell County, two singles, slightly higher. Thus further runs are indicated, along valley roads. Also, this shows that at certain periods, one species present may not call even tho the other calls. Time had not permitted me a chance to run several times over the same route to check this.

BEN B. COFFEY, JR., Memphis.

CORRECTION: Greater Scaup in table under Columbia on p 28 June 1962 should have read Lesser Scaup — 1.

NORTHERN FINCHES SUMMERING ON ROAN MOUNTAIN.—In an analogous occurrence, Pine Siskins and Purple Finches, appearing more often than not during the winter on Roan Mountain, but were not present last winter, were observed in mid-summer in the coniferous forest of Roan at 5,700 - 6,000 feet elevation.

Observing a flock of Pine Siskins May 11 at the entrance to Laurel Fork some eight miles southeast of Elizabethton was thought by the writer to be the last of these birds for the season before he heard and saw one or two birds of this species on May 30 on Roan Mountain. Next, a single bird was observed in the same locality on June 7. Again on July 1 a few were heard and seen.

A bird song unfamiliar to the writer was traced on the latter date to a female or immature Purple Finch sitting in the top of a spruce in the Rhododendron Gardens on Roan Mountain at about 5,900 ft. Ken Dubke accompanied me to the locality for a follow-up on July 4. We did not hear or see the Purple Finch in the Gardens, but heard its song in three places along the Balsam Road at 5,700 ft. On the return, Ken spotted an adult male Purple Finch in a tree in the Gardens after we had heard it singing. We also heard and saw the female or immature and in addition Pine Siskins.

On subsequent trips Dubke and I saw both species on July 8 and 15 in the same general vicinity on Roan Mountain, with the Purple Finches singing vigorously. On the latter date we heard three of them singing simultaneously. While watching one of these birds in the top of a balsam, to our surprise a male Red Crossbill alit some 75 feet from us in the top of a dead balsam. A total of 7 were listed by us on that day. The species has been noted continuously since in small numbers, mostly by its call note, if not seen. About two or three were heard on September 9. No crossbills have ever been observed by me on Roan previously despite many trips to the locality.

No trace of Pine Siskins or Purple Finches could be found after July 15. They had quit singing and were no longer seen. There is a possibility they did not stay and moved north. These birds probably had been wintering farther south and, finding an ample crop of fresh seed cones on balsam and spruce when passing over Roan Mountain on their migration flight north, likely lingered. On no occasion were any birds of the species seen carrying food to give rise to the thought they might have been breeding here.

FRED W. BEHREND, Elizabethton.

YOUR DUES are due January 1st, 1963, which will be before the December issue reaches you. For amounts, see last page of this issue. Chapter members should pay dues to their local treasurers as promptly as possible. Those who are not chapter members, or those who are out-of-State members, or subscribers, will please remit direct to your State Treasurer. The job of billing is costly and time-consuming so your cooperation will be appreciated. Since the amount involved is small, you may wish to consider letting your remittance cover both 1963 and 1964, or even longer.

HENRY E. PARMER, State Treasurer, 3800 Richland Ave., Nashville 5.

# THE MIGRANT

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## BOOK REVIEW

CARE AND BREEDING OF BUDGERIGARS, CANARIES AND FOREIGN FINCHES by R. B. Bennett, F.Z.S. Arco Publishing Company, Inc., 480 Lexington Avenue, New York 17, N. Y. 320 pps. 6" x 9", $10.00.

The author has drawn from long personal experience a wealth of vivid details relating particularly to Budgerigars and Canaries. Every phase of this interesting hobby has been presented. The origin and history of development of these and more than 200 other foreign finches are given. For the beginner he has related the characteristics for which to look in selecting stock, whether for personal pleasure derived from song, talking ability or breeding for show purposes or the development of special color characteristics. Essential equipment and instructions for the care, feeding, housing, training, mating, care of young, diseases and preparations for exhibition are presented. Many pointers are given which would be of value to the experienced or professional bird fancier. Fair warning is given to those who might consider entering the cage bird breeding business for profit.

Many of the color combinations are beautifully illustrated on 12 full-color plates and eight monotone plated with color background showing 139 birds. Also there are eight pages of photographs and 100 line drawings distributed throughout the book.

The author is well known to aviculturists as a breeder, exhibitor, judge, writer and artist. He has exported and imported birds for many years from all parts of the world and contributes to many publications on the subject of cage birds.

The volume is comprehensive in scope and a desirable addition to the library of the amateur or professional breeder or exhibitor and for anyone interested in birds whether tame or wild.

LEE R. HERNDON.

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Beginning this year, the major ornithological journals have adopted a new method of printing dates; for example, 2 May instead of May 2. In the interest of standardizing the literature, we are falling in line and request that our contributors follow this pattern in writing up articles for publication in THE MIGRANT.

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DEVOTED TO TENNESSEE BIRDS

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VOL. 33 DECEMBER 1962 NO. 4

## BIRD CASUALTIES AT A NASHVILLE T-V TOWER

### By ALBERT F. GANIER

Mass casualties of birds migrating at night in the autumn season have been the subject of a number of articles in past issues of this journal. Such casualties have occurred at airport ceilometer beams, television towers and to a lesser extent at buildings. We may assume too that such casualties occur at the steel bridges which cross our rivers, such as the several that span the Mississippi and the Tennessee.

Our earliest "bird-falls" at Nashville occurred at ceilometer beams located at airports, the attraction being less the narrow light-beam itself but rather the mushroom canopy of light formed on the underside of low clouds above, i. e. the "ceiling". To this, southbound birds converged in their flight. I have heretofore (1954) expressed the belief that the flying birds, circling and descending the light beam, to a point where "many low-flying ones which fly thru the beam are temporarily blinded and, losing their sense of direction and altitude, strike the pavement before they know they are close to the ground." Fortunately, it has been found that turning off the light temporarily or placing over it a proper shield to obscure its white rays, thru the cooperation of the weather bureau personnel, has relieved the hazard. They report no casualties in several years. On another page in this issue however will be found a description of a disastrous bird-fall in west Texas where such precautions had not been put in effect and which on 6 October, caused the death of about 6,000 birds.

As television towers came in and rose to unprecedented heights, they became a great menace to nocturnal migrants. Our W.S.M. tower, for example, located on a high hill-top and rising to a great height, scrapes with its apex light the underside of a low cloud ceiling reported by our weather bureau as 1,400 feet above the ground. In form, the towers can be described as resembling a skeletonized needle, they being formed of light structural steel members. They are triangular in cross-section, each side measuring 12 feet in length and decreasing toward the top. The W.S.M. tower is located 5 miles west of Nashville court house in suburban territory and overlooks the wide Cumberland river bottoms. Its total height is 1,369 feet above its foundations and this includes a 116 foot high tubular antenna at the top. The sea-level elevation of the river bottoms is 400 feet, the hilltop tower site is 680 and the apex of the "needle" (the tower) is 2,050. The weather bureau site is 600. The tower is kept erect by three sets of guy cables, attached to each of the three corners, at 400, 800 and 1,250 feet heights. Each set of cables consists of a pair, thus 18 cables extend far outward to anchors in the ground, the longest being 1,650 feet. The tower and these cables are the obstructions the birds strike before falling.

SMITHSONIAN INSTITUTION MAR 8 [illegible]

The birds are attracted to the tower because of 10 sets of red lights, spaced equally from about 100 feet above the base to the extreme top. Five sets of these are flasher lights or "blinkers". These lights are easily visible from points several miles away but create no perceptible general illumination. It would seem that the color of the light and the apparent aliveness of the blinkers has a particular attraction for birds and this has been the conclusion also reached by Cochran and Graber (**Wilson Bulletin**, 1958, 70:378-380.). For comparison, a series of powerful elevated spotlights in the L. and N. RR switching yard, has not as yet attracted nocturnal migrants. From what distance the birds funnel in to such towers it would not be possible to say but we can assume the attraction would diminish progressively out to two or three miles each way. The lights are of course necessary for the protection of passing planes.

With this picture of the situation in mind, what follows will be a report on three bird-falls, occurring 5-6 Sept., 5-6 Oct. and 16-17 Oct, 1962. Double dates are used, assuming that casualties occurred both before and after midnight. The total numbers recovered were 135 (22 species), 167 (16 species) and 34 (18 species), respectively. Compared with similar casualties in the past, the numbers are not large but from each such occurrence we learn many details of interest, some of which are surprising even to experienced observers. The 1962 dates are of special interest in that the first represents an early migration date, the next a date well after the assumed peak and the last, a late date. On the last date, the sky was clear. The birds were picked up by H. E. Parmer and the writer and were found at from 75 feet north of the tower to 200 feet southward. Search further out under the cables yielded nothing.

The list of 39 species and the numbers of each recovered is given below, the numbers being listed in order for 5-6 Sept., 5-6 Oct. and 16-17 Oct.

| | |
|---|---|
| Least Bittern | 1-0-0 |
| Yellow-billed Cuckoo | 1-0-0 |
| Yellow-bellied Flycatcher | 1-0-0 |
| Wood Peewee | 0-0-1 |
| Brown Creeper | 0-0-3 |
| Catbird | 0-2-0 |
| Golden-crowned Kinglet | 0-0-2 |
| Ruby-crowned Kinglet | 0-0-1 |
| Yellow-throated Vireo | 0-1-0 |
| Red-eyes Vireo | 15-16-0 |
| Philadelphia Vireo | 0-2-1 |
| Black-&-white Warbler | 23-1-0 |
| Prothonotary Warbler | 1-0-0 |
| Golden-wing Warbler | 1-0-0 |
| Cerulean Warbler | 1-0-0 |
| Blackburnian Warbler | 3-1-0 |
| Chestnut-sided Warbler | 1-0-2 |
| Bay-breasted Warbler | 0-22-1 |
| Blackpoll Warbler | 1-0-0 |
| Palm Warbler | 0-5-2 |
| Ovenbird | 17-6-2 |
| Kentucky Warbler | 13-0-0 |
| Mourning Warbler | 0-0-1 |
| Yellowthroat | 0-1-1 |
| Yellow-breasted Chat | 12-0-0 |
| Wilson's Warbler | 0-2-0 |
| Canada Warbler | 5-6-0 |
| Amer. Redstart | 5-1-0 |
| Tennessee Warbler | 4-86-9 |
| Nashville Warbler | 0-0-1 |
| Yellow Warbler | 5-0-0 |
| Magnolia Warbler | 22-14-3 |
| Myrtle Warbler | 0-0-1 |
| Black-thr. Green Warbler | 1-6-2 |
| Bobolink | 0-2-0 |
| Baltimore Oriole | 1-0-0 |
| Rose-breasted Grosbeak | 0-0-1 |
| Indigo Bunting | 0-0-1 |
| Dickcissel | 1-0-0 |

and 2 Red Bats on 5-6 Oct.

The most interesting of the above were the Bobolink and the Mourning Warbler, both rare fall transients here, and the Blackpoll Warbler which is our fourth fall record for this species. The bats, a migratory species, must have been half asleep and inattentive. After 5 Sept., Parmer visited the tower nearly every morning that followed a cloudy night up to 7 Nov. and on 7 mornings, picked up an additional 18 birds.

We have come to look for such bird-falls on nights when a cold front is approaching with northerly winds, when there is a low ceiling of 2,000′ or thereabout and when light rain or foggy conditions exist. 5-6 Sept. conformed to these conditions. It should not be assumed that migration waves are dependent on these combinations for in the past we have found, from telescopic observations of birds passing across the full moon, that birds migrate in clear weather too.

Since weather conditions are involved so strongly in these bird-falls, the following data was secured from the local weather bureau.

| | Sept. 5-6 | | | Oct. 5-6 | | | Oct. 17-18 | | |
|---|---|---|---|---|---|---|---|---|---|
| Hour | Ceil. | Temp | Wind | Ceil. | Temp | Wind | Ceil. | Temp | Wind |
| 6 p.m. | 1300 | 68 | 10 NNE | 12000 | 74 | 5 SW | Clear | 64 | 5 N |
| 8 p.m. | 1300 | 66 | 10 NNE | 7000 | 70 | 4 S | Clear | 59 | 6 N |
| 9 p.m. | 3000 | 65 | 10 NNE | 10000 | 68 | 0 | Clear | 57 | 6 N |
| 10 p.m. | 3500 | 65 | 10 NNE | 10000 | 68 | 0 | Clear | 56 | 5 N |
| 11 p.m. | 3900 | 65 | 10 NNE | clear | 67 | 6 S | Clear | 55 | 5 N |
| 12 p.m. | 3900 | 64 | 10 NNE | 10000 | 66 | 2 S | Clear | 55 | 5 NNE |
| 1 a.m. | 12000 | 63 | 10 NNE | 5500 | 66 | 0 | Clear | 52 | 2 N |
| 2 a.m. | 12000 | 61 | 10 NNE | 6000 | 67 | 4 S | Clear | 52 | 0 |

It will be noted that temperatures were not "cold", that on 5-6 Oct. there were no northerly winds and that low ceilings occurred only on 5-6 Sept. We do not know at what hours the birds fell.

The specimens were kept frozen and were passed around to several of our members for study of plumage, etc. A few were made up by the writer for study skins but the profuse fat, which quickly turns to oil, makes production of good skins quite difficult. A considerable area of concrete paving on the south side of the tower probably killed many birds that might have recovered had they fallen on grassy areas.

At the recent meeting of the Kentucky Ornithological Society, Floyd Carpenter of Louisville told me of a bird-fall that had occurred at the village of Magnolia, Ky., which is 100 miles NNE of Nashville. On the morning of 27 Sept., 270 small passerine birds of 30 species were picked up over a four acre area following a foggy night. The birds had apparently struck buildings, poles and wires since neither ceilometer beams nor television towers were present.

Lack of space prevents appending a bibliography of articles pertinent to this subject but more of these have appeared in THE MIGRANT than in any other American publication. The reader is referred to the Contents Index which appears on the last pages of each December issue.

2112 Woodlawn Dr., Nashville, Tenn.

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A TEXAS BIRD-FALL. — From the Nov. 1962 News-Letter of the Texas Ornith. Society, we learn that on or about 4 Oct., 1962, at around 3 a. m., "6,000 or more birds flew into the Laughlin Air Base (at San Angelo, 200 miles N-W of San Antonio). At least 6,000 were killed and many of them, especially the Mourning Doves, had hit the concrete head and breast first as proved by examination of the birds. There were a total of 24 species represented and of the total kill, 4,200 were doves. Among other species were a Poor-will, a White-necked Raven, grebes, plover, blackbirds, orioles, warblers, Dickcissels and other small birds. On this night, there was a very heavy cloud overhead and the 3,000,000 candle-power ceilometer beam that is used to determine the ceiling was turned on. When its rays, including some infra-red rays, hit the cloud bank, they bounced back and brilliantly illuminated the airfield. The cloud kept getting lower than its original height of about 2,500 feet. The birds were not only attracted by the light but became confused as to which way was up and which way was down. Dr. Davis of A. and M. College thinks the infra-red rays had a lot to do with "confusing the birds". The account further states that a "norther" was heading south across Texas at the time.

# THE STATUS OF WILD TURKEYS IN TENNESSEE

## JAMES C. LEWIS*

In March, 1962, a statewide survey of occupied range and wild turkey populations was completed. This survey and one made in 1959 showed major changes in the distribution of Tennessee's wild turkey flocks (Table 1) since the 1951 survey reported by Shultz (1955).**

The information contained within this report is a population estimate by officers, area game managers, and district biologists of the Tennessee Game And Fish Commission. Estimates are based on their personal observations and reports of cooperators.

Fifty-seven Tennessee counties reportedly contained wild turkeys in 1951. By 1962, only 23 of the original 57 were still occupied. However, ten counties had been restocked using wild trapped turkeys, making a total of 33 counties containing turkeys in 1962 (Figure 1). The greatest occupied range losses, of eleven and seven counties respectively, occurred in the Highland Rim and Cumberland Plateau Physiographic Divisions.

These occupied range losses were apparently coincident with human population growth and changes in land use which remnant flocks were unable to cope with.

Fifty-seven per cent of Tennessee's wild turkeys and 34 per cent of the occupied acreage is within the boundaries of the Tennessee Game and Fish Commission's wildlife management areas.

No population or occupied acreage estimates were available for the 1951 survey. However, in the past three years the estimated statewide population has increased by approximately 500 birds, to a total of 3,700 turkeys. The 1959 occupied acreage was reported to be 1,219 square miles. In 1962 the estimated occupied acreage had increased to 1,804 square miles. The greatest flock numbers and range acreage are found in the Unaka, Cumberland Plateau, and Mississippi Bottomland Physiographic Divisions.

At the present time turkey hunting is restricted to a gobblers-only season in April and May. Approximately 150 turkeys are harvested annually. Tennessee Ornithological Society members will find it easiest to observe wild turkeys and hear gobbling on Ocoee, Shelby, Catoosa, Fall Creek Falls or Central Peninsula Wildlife Management Areas.

* This paper is a contribution of Federal Aid to Wildlife Management, Pittman-Robertson Project W-35-R Tennessee.

** Schultz, V. L. 1955. Status of the wild turkey in Tennessee. The Migrant 26 (1):1-8.

Tennessee Game And Fish Commission, Crossville.

Table 1. Tennessee Counties Containing Wild Turkeys Within the Various Physiographic Divisions

| | 1951 | 1959 | | 1962 | |
|---|---|---|---|---|---|
| Physiographic Divisions | | Original | Restored | Original | Restored |
| Unaka | 8 | 6 | 0 | 6 | 1 |
| Cumberland Plateau | 18 | 11 | 0 | 11 | 0 |
| Highland Rim | 17 | 5 | 3 | 3 | 3 |
| W. Tennessee Plateau | 3 | 0 | 3 | 0 | 3 |
| Mississippi Bottomland | 4 | 2 | 1 | 2 | 1 |
| Valley of E. Tennessee | 7 | 0 | 2 | 1 | 2 |
| | 57 | 23 | 9 | 23 | 10 |
| Total | | 32 | | 33 | |

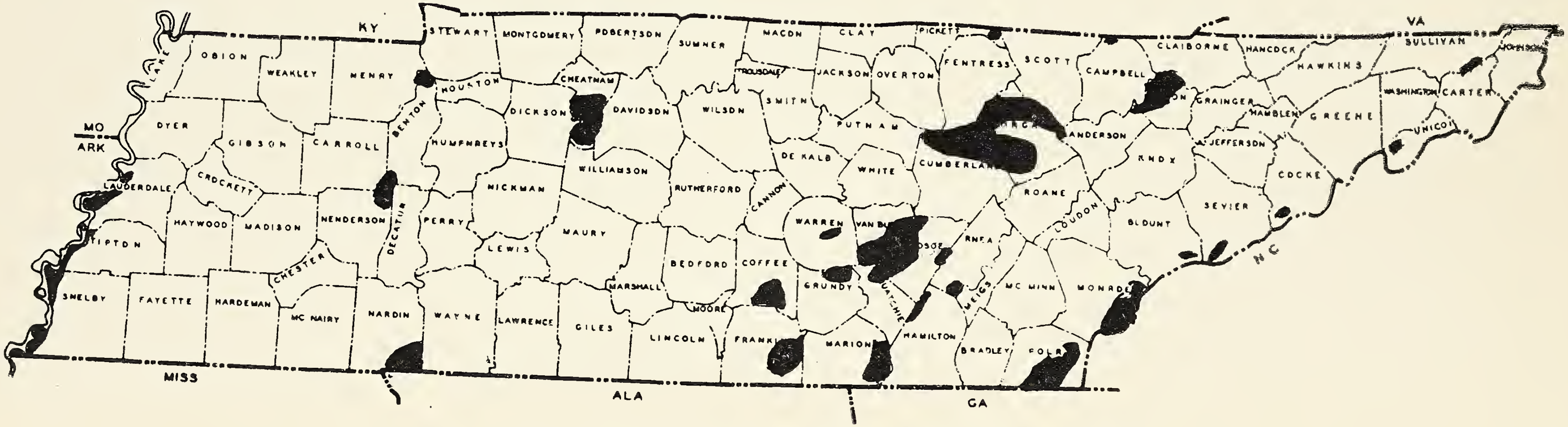

Figure 1. Occupied Wild Turkey Range in Tennessee, 1962.

# THE 1962 CHRISTMAS SEASON BIRD COUNTS

**By T.O.S. Members**

The thirty-second annual Christmas Bird Count tabulated in THE MIGRANT lists 116 species and subspecies. The number has been exceeded on five counts and tied with one other, all within the past twelve years. The tabulated counts are from thirteen areas and four additional counts were confined to high altitudes (approximately 2,700' to 6,600') only and are presented in paragraph form under the appropriate heading for the location. Three of the high altitude counts were made by Fred W. Behrend, alone. No species was reported on these counts that was not reported elsewhere. The Great Smoky Mountain count includes both high and low altitudes.

Only the Orange-crowned Warbler occurs in the list for the first time, bringing the grand total of species and subspecies to 163 for the thirty-two consecutive annual counts.

A comparison of abundance of a few species on the 1959 count and the current count is of interest because of the protracted snow and cold weather during February and March of 1960 when these species were reported greatly decimated. Phoebe was down 41%, Carolina Wren down 44%, Hermit Thrush up 84%, Bluebird down 42% and Myrtle Warbler down 68%. The extremely cold weather in mid-December, bringing sub-zero temperatures state wide may have been responsible for the smaller numbers of some species this year. Red-headed Woodpeckers, Brown Thrashers and Rusty Blackbirds appear to be becoming more widely distributed than in recent years, having been reported from eight to ten localities this year compared to two to four localities as recently as 1957.

Only fourteen species occur on all of the lists while nine other species are absent from only one of the tabulated lists. Twenty-one species were reported from only one locality while the following seven species were represented by a single individual: Black-crowned Night Heron, Rough-legged Hawk, Am. Woodcock, Pine Warbler, Tree Sparrow, Harris' Sparrow and Lincoln's Sparrow.

Information on the counts and listing of the counts in the table are progressively from west to east. The four high altitude counts are included in paragraph form under the appropriate area heading because of the small numbers represented.

## INFORMATION ON THE COUNTS

MEMPHIS. — 1953 areas less some bottoms; plus Mud Island; wooded bottomlands 30%, deciduous woods, city parks 25%, pastures 19%, suburban roadsides 24%, river edge 2%. Dec. 23; 7 a. m. to 5 p. m. Fair; temp. 37-43, wind 14-23 N. 19 observers in 6 parties. Total party-hours 74 (56 on foot, 18 by car); total party-miles 176 (52 on foot, 124 by car). Orange-crowned Warbler (3 singles, RH, BC, GP separately) 1st Count record; Pine Warbler (Mrs. AIS & Mrs. JHMcW). Mr. and Mrs. Ben B. Coffey, Jr., Drew Anderson, Mrs. Ed Carpenter, Mary Davant, Mrs. Henry Dinkelspiel, John H. Embury, Earl Fuller, Royce Hough, Edward M. King, Charles McPherson, Mrs. J. H. McWhorter, Nelle Moore, George Peyton, Jr., Mrs. Henry A. Schiller, Alice Smith, Dr. and Mrs. Arlo I. Smith, Lynn Smith. Also Mrs. Chas. Seahorn and Mrs. Paul C. Owen in their yards.

REELFOOT LAKE. — All points within 15 mile diameter circle, center Reelfoot Lake; lake 20%, marsh 5%, deciduous woods 45%, fields and farms 18% and roadsides 12%. Dec. 28; 7:30 a. m. to 4:30 p. m. Overcast, rain in p. m.; temp. 22° to 30°; wind E 2-3 m.p.h.; 8 observers in 3 parties. Total party-hours, 25 (10 on foot, 8 by car and 7 by boat); total party-miles, 183 (12 on foot, 163 by car and 8 by boat). Seen in area count period but not on count day: Redhead Duck, Robin. Evelyn Cole, John R. Conder (compiler), John L. Delime, W. Fickel, Willard Gray, W. L. Hall, Jr., Hunter M. Hancock and Clell T. Peterson.

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NASHVILLE. — Approx. same area as in past 12 years; area of a 15 mile diam. circle centering on Harding 7 miles W. of Nashville. Included were Radnor and Bush's lakes, deciduous wooded hills, 40%; open fields and pastures, 25%; river-bottom fields, 20%; roadsides and suburban yards including 15 feeding stations, 15%. Dec. 29, 6:30 a. m. to 4:30 p. m. Temp. 49 declining to 36 degrees; wind light in a. m.; 12 m.p.h. in p. m.; drizzling rain and foggy in a. m., cloudy p. m.; visibility poor. 30 observers in 8 parties. Party-hours 96 (44 on foot, 22 by car, 30 watching feeders). Party-miles 172 (33 on foot, 139 by car). Total 70 species, (below par, due to weather); 2,506,440 individuals of which 2,500,000 were estimated at a roost. All Grackles, Cowbirds and Redwings listed, consisted of one flock of each. The 7 Brewer's Blackbirds (A.F.G. et al) were in a stock feeding lot. Only 1 duck at Radnor. Gulls and Pipits were on or about Bush's lake. 8 parties including 33 observers as follows: Mr. and Mrs. B. H. Abernathy, Anne Arnette, O. C. Ault, Mrs. William and Susan Bell, Ruth Castles, Mrs. Ovid Collins, Annella Creech, D. J. and Fairman Cumming, Milbrey Dugger, J. O. Ellis, Chas. Farrell, Albert F. Ganier (Compiler), Katherine Goodpasture, Mr. and Mrs. Paul W. Green, Virginia Hagan, Mr. and Mrs. John Herbert, Will Hon, J. P. Jones, Geo. R. Mayfield, Jr., Marguerite McKinney, James Parrish, H. E. Parmer, Mr. and Mrs. W. A. Puryear, Jennie Riggs, Mr. and Mrs. Eugene Ruhr, Mr. and Mrs. Robt. Sharp, Mr. and Mrs. Kirby Stringer, Lawrence and Larry Trabue, Jesse E. Wills. Mrs. Stringer compiled a list of 37 species observed by other members watching their feeding stations and home grounds. They were Mrs. Mark Bradford, Jr., Mrs. Bernard Britt, Merrill Carter, Mrs. K. B. Everly, Mrs. R. E. Faitoute, Mr. and Mrs. Wm. E. Fentress, Mrs. W. C. Finch, Mary Frazer, Mr. and Mrs. Hugh L. Fry, Mrs. H. G. Knauth, W. A. Puryear and Mr. and Mrs. Max Schuerman.

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COLUMBIA. — Area center at Zion Church SW of Columbia, includes Columbia, Mt. Pleasant and Hampshire. Dec. 26, dawn to dusk; cloudy with some snow remaining on the ground. Temp. 25° to 50°; wind W 2-8 m.p.h.

Harris' Sparrow found by George Mayfield, Jr. with flock of White-crowned Sparrows on a briary and grassy hillside in mock-orange bushes near an old barn. This bird was a full plumaged male with black throat and head completely surrounding the much lighter grayish-brown cheek patch. It was observed first from the old barn at 10' range. The Dan Gray family, several days later, found an immature Harris' Sparrow on the same hillside, so there must be at least two birds there. The search continues.

The two Short-billed Marsh Wrens have been found consistently to and including census date in thick marsh grass and weeds on the Dawson Frierson farm about one mile north of Mt. Pleasant. Apparently they are wintering there. The Hooded Merganser was seen on a secluded fresh water lake next to Arrow Lake near Mt. Pleasant.

Mary Lucy and William Fuqua, Dan, Jr., Dan III, Dawson and Gaither Gray, Cleo and George Mayfield, Jr. (compiler).

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LEBANON. — Same area as covered in previous years, including Lock 5 Wildlife Refuge and adjacent portions of Old Hickory Lake. Although the area around Lock 5 Refuge was covered Dec. 28 and the remainder in the vicinity of Lebanon on Dec. 29, the two have been combined since there was practically no duplication of species. Clear Dec. 28 and gloomy and rainy Dec. 29. John M. Drennon made the count around Lock 5, Myrtle B. Hobbs (compiler).

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COOKEVILLE. — Area the same as in previous years, including Quinlan and City Lakes, 10%; city lots, 10%; fields 30%; swamps, 10% and woods, 40%. Dec. 28; 7:30 a. m. to 4:30 p. m. Temp. 25° to 45°; wind 0-5 m.p.h.; sunny until 2:00 p. m., overcast thereafter; shallow water frozen until almost noon. Fifteen observers in ten parties; total party-hours — 90; total party-miles — 159 (24 on foot, 135 by car). Mrs. George Boyd, Dr. Claude Bruce, Dr. and Mrs. J. C. Cummins, Mrs. James and Jim Haile, Roy Hinds, P. L. Hollister (compiler), Elizabeth Killifer, Mrs. Lee Medley, Mrs. S. L. McGee, Dr. Tom Moore, M. R. Richmond, Marie White and Mrs. Milo Williams.

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CHATTANOOGA. — All points within a 15-mile diameter circle, center National Cemetery in city; fields and pastures 35%, woodlands 20%, ponds and lakes 15%, creeks and rivers 15%, roadside 10% and residential 5%. Dec. 30; 4:00 a. m. to 5:00 p. m. Clear, temp. 27° to 42°; wind N, 6-10 m.p.h. 18 observers in 8 parties. Total party-hours, 64 (43 on foot, 21 by car); total party-miles 326 (36 on foot, 290 by car). Eight species reported for the first time on the Chattanooga count: Wood Duck, Redhead, Bald Eagle, Barred Owl, Catbird, Palm Warbler, Pine Siskin and Lincoln's Sparrow. Ralph Bullard in the field at 4:00 a. m., got the desired results: four species of owls to help the chapter run up its highest Christmas count. Two Catbirds were reported by two parties from widely separated areas (E. West, Ralph Bullard). The Palm Warblers were seen by Ralph Bullard at a 20' range, along a fence row under excellent lighting conditions. Both species were easily identified. The Lincoln's Sparrow was reported in excellent light on a clear, sunny day (R. Bullard, M. Crownover). At 15' the bird perched on a weed stalk and posed for lengthy observation. The buff field marks were unmistakable. Mrs. J. R. Barnwell, Benton Basham, Guy Beaty, Mr. and Mrs. Ralph Bullard, Rock L. Comstock, Jr., (compiler), Mrs. Rock L. Comstock, Jr., Miss Gladys Conner, Mrs. Hugh Crownover, Nat Halverson, Mr. and Mrs. Howard Meadors, Miss Rheta Morrison, Jack Roberts, Mrs. Henry L. Sliger, Douglas L. Tunsberg, Mr. and Mrs. Eugene M. West.

KNOXVILLE. All points within a 15-mile diameter circle, centered at Ball Camp Pike and Oak Ridge Highway. Dec. 23; 7:30 a. m. to 5:30 p. m. Temp. 30° to 45°; cloudy; wind, S, W-NE 2-10 m.p.h. Twenty-two observers in 12 parties. Total party-hours, 118 (18 on foot, 100 by car); total party-miles, 354 (50 on foot, 304 by car). Jim Campbell, John Elson, Mary Enloe (compiler), Bill Gallagher, Mr. and Mrs. H. C. Garlinghouse, Beth Lacy, Helen Lewis, Mr. and Mrs. J. T. Mengel, Mr. and Mrs. R. A. Monroe, Holly Overton, J. B. Owen, Mrs. Kenneth Sanders, Maxie Swindell, James T. Tanner, Drs. Sam and Isabel Tipton, Mr. and Mrs. George R. Wood.

GREAT SMOKY MOUNTAINS NATIONAL PARK, Tenn.-N. C. — All areas are within a 15-mile diameter circle centered on Bull Head of Mt. LeConte — same general area as 1937-1956 counts. Dec. 30.; 7:15 a. m. to 5:30 p. m. Clear; temp. 20° to 38°; wind 3-5 m.p.h.; ground bare, mostly frozen. 33 observers in 10 parties. Total party-hours 81 (70 on foot, 11 by car); total party-miles 210 (65 on foot, 145 by car). Carlos Campbell, James Campbell, Mr. and Mrs. Robert J. Dunbar, John Elson, Mary Enloe, Mr. and Mrs. W. F. Gallagher, Mr. and Mrs. H. C. Garlinghouse, David Highbaugh, Phillip Huff, Elsie S. Janson, Helen K. Lewis, Dorothy J. McLean, Mrs. George W. McGown, Mr. and Mrs. Robert A. Monroe, Julia I. Moore, Mrs. Earl F. Olson, Mrs. E. E. Overton, Neil J. Reid, Mr. and Mrs. Louis F. Smith, Jr., Arthur Stupka (compiler), Mr. and Mrs. Thomas C. Swindell, Dr. James T. Tanner, Dr. Samuel R. Tipton, Mr. and Mrs. W. J. Vaughn, Mr. and Mrs. George R. Wood (Tennessee Ornithological Society, National Park Service, and Guests).

GREENEVILLE. — All points within a 15-mile diameter circle, center Mt. Pleasant Church, to include Lick Creek, Roaring Fork, Davey Crocket Lake, Nolichuckey River, Paint Creek, Albany, Tusculum and Greeneville; woodland 50% (deciduous with small patches of pines and cedars), open fields and pastures 45% (includes ponds and lakes), towns 5%. Dec. 28; 5:30 a. m. to 5:30 p. m. Foggy to clear; temp. 40° to 48°; practically no wind. 9 observers in 4 parties. Total party-hours, 20 (6 on foot, 14 by car); total party-miles, 53 (6 on foot, 47 by car). Seen in area during count period but not on count day: Marsh Hawk and Red-headed Woodpecker. Mrs. Turner Clinard, Mr. and Mrs. Willis Clemens, Mrs. Carrie Christiansen, Mrs. Chester Darnell, Mr. and Mrs. King Gaut, Mrs. Richard Nevius, Richard Nevius (compiler), Mrs. Royal Spees and Karl Spees.

KINGSPORT. — Same area as in previous years. Southeastern slope of Bays Mountain, Holston River at State Park and Boone Lake behind dam. Dec. 29; 8:30 a. m. to 4:30 p. m. Steady rain; 35° to 45°. Thomas Finucane, Robert M. Switzer, Jr., Mrs. Robert M. Switzer (compiler).

BRISTOL, Tenn.-Va. — All points within a 15-mile diameter circle, center at junction of U.S. 11 and Va. (state) route 625, one mile NW of last year's center, to include Bristol, Stone Mill Marsh and South Holston Lake and River; fields and farmland 40%, mixed deciduous forest 25%, lake and river 15%, town and residence 10%, misc. 10%. Dec. 24; 7:30 a. m. to 4:30 p. m. Clear, then cloudy with snow in late p. m.; temp. 10° to 32°;

(Continued on page 71)

## THE 1962 CHRISTMAS SEASON BIRD COUNTS

| | Memph. | Reelfoot | Nash. | Col. | Leb. | Cooke. | Chat. | Knox. | Smokies | Green. | King. | Bris. | Eliz. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Common Loon | ........ | ........ | 1 | ........ | ........ | ........ | 3 | ........ | ........ | ........ | ........ | ........ | ........ |
| Horned Grebe | ........ | ........ | ........ | ........ | ........ | ........ | 24 | ........ | ........ | ........ | ........ | ........ | ........ |
| Pied-billed Grebe | ........ | ........ | ........ | 2 | ........ | 1 | 3 | ........ | ........ | ........ | 5 | ........ | ........ |
| Great Blue Heron | ........ | 2 | 1 | ........ | 21 | 28 | 3 | 19 | 2 | 1 | 5 | ........ | 2 |
| Bl.-cr. Night Heron | ........ | ........ | 1 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Canada Goose | 15,500 | ........ | ........ | ........ | 16 | ........ | ........ | 19 | 7 | 60 | ........ | ........ | ........ |
| Hutchins Goose | ........ | 225 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Snow Goose | ........ | 3 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Mallard | 65 | 130,000 | 17 | ........ | 6,000 | 2 | 41 | ........ | ........ | ........ | 4 | 2 | ........ |
| Black Duck | ........ | 3,500 | 30 | ........ | 4,500 | ........ | 76 | ........ | ........ | ........ | ........ | ........ | ........ |
| Gadwall | ........ | 7,900 | ........ | ........ | 175 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Pintail | ........ | 2,200 | ........ | ........ | 12 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Green-wing Teal | ........ | 7 | ........ | ........ | 11 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Blue-wing Teal | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 2 | ........ | ........ | ........ |
| Am. Widgeon | ........ | 6,700 | ........ | ........ | 225 | ........ | ........ | 2 | ........ | ........ | ........ | ........ | ........ |
| Shoveler | ........ | 2,500 | ........ | 3 | 7 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Wood Duck | ........ | 850 | ........ | ........ | 4 | ........ | 1 | ........ | ........ | ........ | ........ | ........ | ........ |
| Redhead | 4 | ........ | ........ | ........ | ........ | ........ | 2 | ........ | ........ | ........ | 10 | ........ | ........ |
| Ring-neck Duck | 61 | 4,800 | 48 | 1 | 265 | ........ | ........ | ........ | ........ | ........ | 2 | ........ | 6 |
| Canvasback | 2 | 1 | ........ | ........ | ........ | ........ | 3 | ........ | ........ | ........ | 1 | ........ | ........ |
| Lesser Scaup | ........ | 300 | 17 | 1 | 120 | 2 | 11 | ........ | ........ | 1 | 13 | 9 | 3 |
| Common Goldeneye | ........ | 8 | 2 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 2 | ........ | 1 |
| Bufflehead | ........ | ........ | ........ | ........ | ........ | ........ | 6 | ........ | ........ | ........ | ........ | ........ | 5 |
| Hooded Merganser | ........ | ........ | ........ | 1 | ........ | ........ | 97 | ........ | ........ | ........ | 1 | ........ | ........ |
| Common Merganser | ........ | 2 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Turkey Vulture | 2 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 12 | ........ | 13 | ........ |
| Black Vulture | 6 | ........ | ........ | 1 | ........ | ........ | ........ | ........ | ........ | 14 | ........ | 1 | ........ |
| Cooper's Hawk | 1 | ........ | 2 | ........ | ........ | 2 | 1 | ........ | ........ | 1 | ........ | ........ | ........ |
| Red-tail Hawk | 33 | 7 | 21 | 4 | 5 | 6 | 5 | 2 | 5 | 1 | ........ | ........ | ........ |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Red-shouldered Hawk | ....... | 4 | 1 | 1 | 10 | 2 | ....... | 4 | ....... | ....... | ....... | ....... | ....... |
| Rough-legged Hawk | ....... | ....... | 1 | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... |
| Bald Eagle | ....... | 9 | ....... | ....... | ....... | ....... | 2 | ....... | ....... | ....... | ....... | 1 | ....... |
| Golden Eagle | ....... | ....... | 2 | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... |
| Marsh Hawk | 1 | 3 | 1 | 3 | 4 | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... |
| Peregrine Falcon | ....... | ....... | ....... | ....... | 2 | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... |
| Sparrow Hawk | 18 | 3 | 23 | 7 | ....... | 6 | 10 | 9 | 2 | 5 | 1 | 4 | 1 |
| Ruffed Grouse | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | 13 | ....... | 2 | ....... | 3 |
| Bobwhite | 82 | ....... | 9 | 1 | ....... | ....... | 33 | 50 | 25 | 7 | ....... | 15 | 17 |
| Am. Coot | 15 | 6,000 | 1 | ....... | ....... | ....... | 1 | ....... | ....... | ....... | ....... | 1 | ....... |
| Killdeer | 37 | ....... | 61 | 4 | 1 | 6 | 139 | 59 | 20 | 15 | 2 | 13 | 6 |
| Am. Woodcock | ....... | ....... | ....... | ....... | 1 | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... |
| Com. Snipe | 2 | ....... | 1 | 1 | 8 | ....... | 12 | 48 | ....... | ....... | 1 | ....... | 2 |
| Herring Gull | ....... | 1 | 1 | ....... | 50 | ....... | 9 | 8 | ....... | 1 | 2 | ....... | ....... |
| Ring-billed Gull | 2 | 55 | 142 | ....... | 5 | ....... | 13 | 126 | 1 | ....... | 4 | ....... | ....... |
| Mourning Dove | 230 | 19 | 87 | 9 | 1,020 | 160 | 274 | 273 | 57 | 255 | 1 | 155 | 15 |
| Barn Owl | ....... | 2 | ....... | ....... | ....... | ....... | 1 | ....... | ....... | ....... | ....... | ....... | ....... |
| Screech Owl | 2 | ....... | 1 | ....... | ....... | ....... | 1 | ....... | ....... | 2 | ....... | ....... | ....... |
| Grt. Horned Owl | 1 | 1 | ....... | 1 | ....... | ....... | 1 | ....... | 1 | 1 | ....... | ....... | ....... |
| Barred Owl | 2 | ....... | ....... | 1 | ....... | ....... | 1 | ....... | ....... | ....... | ....... | ....... | ....... |
| Belt. Kingfisher | 1 | 2 | 9 | 4 | ....... | 1 | 5 | 8 | 1 | 1 | 3 | 6 | 5 |
| Yel.-sh. Flicker | 93 | 5 | 57 | 9 | 5 | 13 | 28 | 32 | 9 | 7 | 2 | 7 | 6 |
| Pileated Woodpecker | 2 | 8 | 24 | 8 | 1 | 4 | 7 | 8 | 15 | 4 | 2 | 5 | 5 |
| Red-bel. Woodpecker | 51 | 12 | 69 | 19 | 3 | 9 | 28 | 30 | 5 | 8 | 1 | 3 | 1 |
| Red-head. Woodpecker | 1 | 1 | 5 | ....... | 2 | 2 | 3 | 6 | ....... | ....... | 2 | ....... | 1 |
| Yel.-bel. Sapsucker | 28 | 6 | 26 | 4 | ....... | 5 | 8 | 9 | 2 | 2 | 1 | 1 | ....... |
| Hairy Woodpecker | 13 | 1 | 21 | 7 | 1 | ....... | 4 | 5 | 15 | 1 | ....... | 3 | ....... |
| Downy Woodpecker | 34 | 7 | 89 | 30 | 8 | 22 | 28 | 46 | 34 | 12 | 2 | 15 | 13 |
| E. Phoebe | 2 | ....... | 1 | ....... | ....... | ....... | 2 | 4 | 6 | ....... | ....... | 2 | 1 |
| Horned Lark | 190 | ....... | 196 | 6 | 5 | 14 | 65 | 19 | 15 | 75 | 13 | 54 | ....... |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Blue Jay | 254 | 6 | 109 | 25 | 17 | 120 | 97 | 264 | 73 | 39 | 8 | 57 | 36 |
| Common Raven | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 4 | ...... | ...... | ...... | ...... |
| Crow | 39 | 300 | 280 | 47 | 10 | 205 | 235 | 598 | 519 | 700 | 9 | 150 | 127 |
| Black-cap Chickadee | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 304 | ...... | ...... | ...... | ...... |
| Carolina Chickadee | 145 | 21 | 200 | 38 | 9 | 50 | 106 | 182 | | 40 | 14 | 47 | 55 |
| Tufted Titmouse | 71 | 31 | 175 | 25 | 28 | 95 | 89 | 153 | 101 | 23 | 10 | 40 | 19 |
| Wh.-br. Nuthatch | ...... | 5 | 1 | ...... | ...... | 8 | 13 | 3 | 13 | 1 | 1 | 11 | ...... |
| Red-br. Nuthatch | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | 16 | ...... | ...... | ...... | 1 |
| Brown Creeper | 13 | 2 | 10 | ...... | 1 | 4 | 5 | 7 | 31 | ...... | 2 | 7 | 5 |
| Winter Wren | 38 | 2 | ...... | 7 | ...... | ...... | 1 | 2 | 3 | 2 | ...... | ...... | 1 |
| Bewick's Wren | ...... | ...... | 6 | 1 | ...... | 6 | 1 | 3 | ...... | 2 | ...... | ...... | ...... |
| Carolina Wren | 74 | 4 | 46 | 10 | ...... | 15 | 38 | 119 | 31 | 8 | 1 | 12 | 22 |
| Sh.-bld. Marsh Wren | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Mockingbird | 118 | 3 | 138 | 11 | 20 | 38 | 144 | 160 | 30 | 26 | ...... | 40 | 21 |
| Catbird | ...... | ...... | ...... | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... | ...... | ...... |
| Brown Thrasher | 12 | ...... | 3 | 1 | 1 | ...... | 15 | 6 | 1 | 2 | 1 | 1 | ...... |
| Robin | 227 | ...... | 500,000 | 42 | 19 | 10 | 368 | 41 | 220 | 35 | ...... | 1 | 26 |
| Hermit Thrush | 14 | 2 | 3 | 2 | ...... | ...... | 2 | 5 | 8 | 1 | ...... | ...... | ...... |
| E. Bluebird | 4 | 5 | 44 | 11 | 4 | 15 | 32 | 13 | 51 | 34 | ...... | 9 | 4 |
| Golden-cr. Kinglet | 29 | 4 | ...... | 2 | ...... | ...... | 24 | 67 | 74 | ...... | 14 | 3 | 11 |
| Ruby-cr. Kinglet | 32 | 4 | 3 | 1 | ...... | ...... | 14 | 4 | 4 | 1 | 1 | ...... | ...... |
| Water Pipit | 2 | ...... | 10 | ...... | ...... | ...... | 23 | ...... | 4 | ...... | ...... | ...... | ...... |
| Cedar Waxwing | 25 | ...... | 23 | ...... | ...... | ...... | 170 | 55 | 79 | ...... | 10 | 9 | ...... |
| Logger-hd. Shrike | 22 | 6 | 19 | 4 | 1 | ...... | 14 | 25 | 6 | 3 | ...... | 5 | ...... |
| Starling | 200,000 | 1,000,000 | 2,000,000 | 1,900 | 300 | 1,100 | 1,533 | 4,708 | 419 | 300 | 11 | 2,397 | 1,092 |
| Orang-cr. Warbler | 3 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Myrtle Warbler | 81 | ...... | 20 | ...... | ...... | ...... | 20 | 53 | 9 | 7 | ...... | 3 | 11 |
| Pine Warbler | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Palm Warbler | ...... | ...... | ...... | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... | ...... | ...... |
| House Sparrow | 2,190 | 42 | 260 | 50 | 60 | 280 | 193 | 349 | 79 | 43 | 8 | 248 | 345 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E. Meadowlark | 515 | 75 | 190 | 18 | 46 | 98 | 249 | 155 | 124 | 75 | 4 | 273 | 5 |
| W. Meadowlark | 7 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Red-w. Blackbird | 200,000 | 1,500,000 | 1,150 | 340 | 200 | ........ | 244 | 50 | ........ | ........ | ........ | 5 | 7 |
| Rusty Blackbird | 151 | ........ | ........ | 88 | ........ | ........ | 10 | 5 | 8 | ........ | ........ | 130 | 8 |
| Brewer's Blackbird | ........ | ........ | 7 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Common Grackle | 300,000 | 650,000 | 22 | 750 | 500 | 15 | 24 | 1,253 | ........ | ........ | ........ | ........ | 1 |
| Brown-hd. Cowbird | 100,000 | 500,000 | 100 | 24 | 105 | 6 | 30 | 1 | ........ | ........ | ........ | 45 | 1 |
| Cardinal | 551 | 40 | 510 | 97 | 26 | 75 | 216 | 460 | 129 | 68 | 15 | 100 | 95 |
| Evening Grosbeak | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 10 | ........ | ........ | ........ | ........ |
| Purple Finch | 59 | ........ | 33 | 2 | ........ | ........ | 19 | 14 | 46 | 7 | ........ | ........ | 27 |
| Pine Siskin | ........ | ........ | 1 | 12 | ........ | ........ | 1 | ........ | 6 | ........ | ........ | ........ | ........ |
| Am. Goldfinch | 245 | 12 | 177 | 20 | ........ | 42 | 319 | 100 | 98 | 9 | 4 | 86 | 38 |
| Red Crossbill | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 21 | ........ | ........ | ........ | ........ |
| Rufous-sd. Towhee | 61 | ........ | 132 | 44 | 11 | 15 | 120 | 142 | 35 | 3 | 9 | 6 | 4 |
| Savannah Sparrow | 28 | ........ | 10 | 2 | ........ | ........ | 6 | 2 | 1 | ........ | ........ | ........ | 2 |
| Vesper Sparrow | 7 | ........ | ........ | ........ | ........ | ........ | 2 | ........ | ........ | ........ | ........ | ........ | ........ |
| Slate-col. Junco | 536 | 8 | 938 | 5 | 8 | 80 | 274 | 317 | 492 | 24 | 15 | 172 | 140 |
| Chipping Sparrow | ........ | ........ | ........ | ........ | ........ | ........ | 25 | 7 | ........ | ........ | ........ | ........ | ........ |
| Tree Sparrow | ........ | ........ | 1 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Field Sparrow | 321 | 25 | 240 | 68 | ........ | 35 | 327 | 207 | 113 | 24 | 2 | 69 | 50 |
| Lincoln's Sparrow | ........ | ........ | ........ | ........ | ........ | ........ | 1 | ........ | ........ | ........ | ........ | ........ | ........ |
| White-cr. Sparrow | 10 | ........ | 27 | 16 | 2 | 2 | 7 | 35 | ........ | 15 | ........ | 8 | 10 |
| White-th. Sparrow | 1,527 | 25 | 408 | 78 | 13 | 70 | 245 | 624 | 134 | 31 | 10 | 65 | 106 |
| Fox Sparrow | 64 | 4 | 6 | 27 | ........ | 4 | ........ | 7 | 4 | ........ | ........ | 2 | 3 |
| Harris' Sparrow | ........ | ........ | ........ | ........ | ........ | ........ | 1 | ........ | ........ | ........ | ........ | ........ | ........ |
| Swamp Sparrow | 267 | 100 | 72 | 32 | ........ | ........ | 44 | 13 | 4 | ........ | ........ | 2 | ........ |
| Song Sparrow | 342 | 30 | 196 | 38 | 2 | 16 | 365 | 173 | 81 | 7 | 5 | 44 | 52 |
| **TOTAL SPECIES** | **70** | **66** | **70** | **61** | **51** | **43** | **82** | **61** | **58** | **51** | **45** | **50** | **49** |
| **Individuals** | 809,066 | 3,831,402 | 2,506,555 | 3,969 | 13,871 | 2,689 | 6,628 | 11,168 | 3,620 | 2,018 | 236 | 4,357 | 2,418 |

wind SW 10 to 15 m.p.h.; most water open. Eleven observers in 5 parties plus 3 feeders. Total party-hours, 41 (29 on foot, 12 by car); total party-miles, 232 (11 on foot, 221 by car). Judith A. Abbott, Fletcher Bingham (compiler), Rockwell Bingham, Rosemary R. Bingham, Don Coffey, Wallace Coffey, B. M. Kiser, Mrs. B. M. Kiser, H. W. Nunley, Robert H. Quillen and Enno van Gelder.

ELIZABETHTON. — All points within 15-mile diameter circle, center Wilbur Dam. Dec. 23; 7:15 a. m. to 5:30 p. m. Partly cloudy to overcast with some light drizzle in afternoon. Temp. 32° to 40°; wind NW 5-8 m.p.h. Seven observers in six parties. Total party-hours, 38 (26 on foot, 12 by car); total party-miles, 107 (21 on foot, 86 by car). (Seen in the area during the count period but not on count day: Screech Owl and Ruby-crowned Kinglet). Fred W. Behrend, J. C. Browning, Ed Davidson, Mr. and Mrs. Lee R. Herndon (compiler), Roby D. May, Jr., and Charley Smith.

EASTERN SMOKY MOUNTAINS. — Start at Cosby Recreation Area to Low Gap on Appalachian Trail along trail to Mt. Guyot to Cosby Camp Ground by Rock Creek Trail; evergreen woods 40%, mixed woods 60%. Jan. 1, 1963; 8:00 a. m. to 5:00 p. m. Clear; temp. 22° to 50°; wind 2 m.p.h. Four observers. Total party-hours, 9; total party-miles, 19.5 all on foot. Ruffed Grouse, 5; Yellow-shafted Flicker, 1; Pileated Woodpecker, 1; Hairy Woodpecker, 2; Downy Woodpecker, 1; Blue Jay, 4; Raven, 2; Crow, 1; Black-capped and Carolina Chickadee, 20; Tufted Titmouse, 10; Carolina Wren, 1; Golden-crowned Kinglet, 1; Cardinal, 3 and Slate-colored Junco, 25. Total Species, 14; total Individuals, 77. Dr. Royal Spees, Karl Spees, Lamar Ellenburg, Richard Nevius (compiler).

BIG BALD MOUNTAIN (Unicoi, Tenn., - Yancey, N. C., counties). — 3500-5500 ft. — Decidious woodland 70%, grassbald 30%. Dec. 30; 7:15 a. m. to 4:30 p. m. Clear to partly cloudy; temp. 8° to 23°; wind NW 3-25 m.p.h., remnants of old snow in patches, trees slightly glazed with ice about 5,000 ft. elevation. Total hours 9¼ (all on foot); total miles 8 (all on foot). Red-tailed Hawk, 1; Tufted Titmouse, 3; Bluebird, 3; Cardinal, 2; Junco, 2. Total, 5 species; 11 individuals. Fred W. Behrend.

ROAN MOUNTAIN (Carter, Tenn. - Mitchell, N. C., counties). — 5500-6150 ft. Coniferous forest (balsam, spruce) 70%; grassbald, 25%; briar - rhododendron - alder patch, 5%. Dec. 31; 8 a. m. to 4 p. m. Clear: temp. 2° to 13°; wind NW to W, 15-40 m.p.h.; 2-5 in. snow; conifers crusted with snow and ice. Total hours, 8 (all on foot); total miles, 9 (Carvers Gap to Balsam Road; entire length of Balsam Road and half way back; up briar patch to far-end parking area; Roan High Bluff; return on paved road to Carvers Gap; Round Bald and Engine Gap; return to Carvers Gap). Red-breasted Nuthatch, 2; Golden-crowned Kinglet, 1; Junco, 2. Total, 3 species; 5 individuals. Fred W. Behrend.

SHADY VALLEY. — Area center at crossing of U.S. 421 and State highway 91. Woodland 40% and fields and pastures 60%. Dec. 19; 7:00 a. m. to 4:30 p. m. Partly cloudy to cloudy, light SW wind. Sprinkle at noon. Temp. 28° to 42°. Patches of old snow, particularly in woods. Total hours

9½ (8 on foot, 1½ by car); total miles 17 (5 on foot, 12 by car). Red-shouldered Hawk, 1; Yellow-shafted Flicker, 1; Pileated Woodpecker, 3; Hairy Woodpecker, 1; Downy Woodpecker, 4; Horned Lark, 2; Blue Jay, 4; Common Crow, 32; Carolina Chickadee, 6; Tufted Titmouse, 3; Brown Creeper, 2; Carolina Wren, 1; Mockingbird, 1; Robin, 22; Golden-crowned Kinglet, 2; Starling, 12; House Sparrow, 59; Meadowlark, 8; American Goldfinch, 13; Cardinal, 6; Red-winged Blackbird, 12; Rusty Blackbird, 3; Brown-headed Cowbird, 5; Slate-colored Junco, 6; Song Sparrow, 8. Twenty-five species, 217 individuals. Fred W. Behrend.

## ROUND TABLE NOTES

BLUE GROSBEAK WITH YOUNG IN THE SOUTH HARPETH VALLEY. — A male Blue Grosbeak *(Guiraca caerulea)* was observed in the Basin Spring area of the South Harpeth Valley on 2 June, 1962. Its most noticeable features were a thick, very light beak, two prominent burnt-orange wing bars, and the marked contrast of a dark blue head against a brown back and wings. Its breast was light, mottled with grayish. It was larger than an Indigo Bunting *(Passerina cyanea)* and smaller than a Robin *(Turdus migratorius)*. It was deliberate in action and had a tendency to elevate its crown feathers. The bird was singing from a utility wire where it sat in near, open view for about three minutes. Reference to Dwight's **Sequence of Plumages and Molts of the Passerine Birds of North America** enabled us to identify this bird as a sub-adult male Blue Grosbeak.

This record, which appears to be the first June record for the Nashville area, stimulated a close watch to determine if the bird were breeding. What appeared to be the same individual was observed in the same place 7 July, when it was again singing with some vigor.

In the same location on 21 July, a bright blue male Blue Grosbeak with adult russet wing bars flew from utility wires to a patch of foxtail grass (Setaria sp.), where several grosbeaks were feeding. The adult male grosbeak, a brownish one with a bluish cast and light beak, and a totally brown individual with a brighter brown head and dark beak moved as a group to more foxtail, Johnson grass (Sorgum halepense), and low saplings. The brown bird gave call-notes like a young bird. It extended and quivered its wings and opened its beak in a begging fashion when the bluish-brown bird approached and appeared to give it food. The young bird, which seemed almost independent, flew well, and at one time held a beetle awkwardly in its beak. At times all three birds could be seen in one binocular field.

While these three grosbeaks, interpreted to be a family group, were in immediate view, a fourth grosbeak with a lightish, mottled breast sang from a wire one hundred yards away. This fourth bird, which did not consort with the other three, appeared to be the sub-adult male observed on 2 June and 7 July. The fact that it continued to sing suggested that it was a non-breeding bird.

One or more of the grosbeaks were observed in the immediate area on numerous occasions through 15 August. The singing male was observed on 24 July and was seen with two brown birds on 26 July. The brownish birds were there on 28 July. On 31 July, one brown and two blue birds were noted. On 8 August, one bird was calling. On 15 August, a blue bird and a completely brown bird were feeding on grass seeds. During these repeated observations, we have had opportunity to note especially the song of this grosbeak, the sharp quality of its call-note, its characteristic silhouetted posture on utility wires, its thick beak, its slightly elevated crown feathers, and its habit of gently fanning its tail feathers.

This record of a male and female Blue Grosbeak accompanied by a young bird and the apparent passage of food from the female to the young would seem to establish the first breeding record of this species for Middle Tennessee. Open, scrub-like growth adjacent to grass-seed fields appears to offer suitable nesting habitat.

Previous records for this precise location were made in 1951, when an adult male was observed on 10 July (Laskey, Moore, Goodpasture. **Migrant,** 1951, **22**:3, 43), and when a brown grosbeak was recorded 31 August and 2 September. The distribution of spring records in Middle Tennessee would lead us to anticipate additional breeding records in ensuing seasons.

KATHERINE A. GOODPASTURE, LARRY DOUGLASS, EARL BISHOP; Vanderbilt Medical School, Nashville.

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A HOUSING SHORTAGE?—April 3, 1962 was the day the Brown Thrasher began her first nest of the season in the backyard hedge, a growth of privet, hackberry, wild grape and honeysuckle. Five days later, with only the supporting foundation of twigs in place, she abandoned that nest spot because of repeated "little boy disturbances" in the hedge. On April 10 she began nest-making in another place in the hedge (which subsequently was successful.)

In the meantime the Catbirds arrived, and on April 27 she also started a nest in the same hedge, some distance from that of the thrasher. On June 5 one little bird left the nest. Too young to be fledged — soft, too-yellow mouth, primaries so underdeveloped it could not fly, pert little tail sketchily covered with nothing more substantial than down, it made one wonder what crisis forced it from the nest too soon. It clung to twigs and small branches for two days, but during the night of June 7 it disappeared.

Early on the morning of June 8 the female Catbird visited the incompleted nest abandoned earlier by the Brown Thrasher. Apparently satisfied after a critical inspection, she immediately began carrying material, finished the nest for her own, and on June 22, both parents began feeding nestlings. Mid-morning of July 7 three sturdy youngsters left the nest. Both adults carried food that day, but on July 8 the busy mother added another chore: she began a third nest!

MAXIE SWINDELL.

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FIRST MIDDLE TENNESSEE RECORD FOR THE LOUISIANA HERON.—On 8 September, 1962 Harry Monk and the writer visited Ashland City marsh while on an unsuccessful trip for migrating shorebirds. We waded through high grass to the edge of the lake and found it full, water going back into the grass. Many stumps were seen, just out of the water. Great Blue Heron and Wood Duck were feeding across the lake. Nearly a quarter of a mile to our right was the head of the lake. There a Great Blue was feeding and some thirty feet away was a very odd bird on a stump that was just out of the water. 16 X 50 binoculars showed it to be facing us with its head and neck down in a feeding position. Its breast was very dark and the color ended in a sharp "V". The belly was bright white. The writer immediately thought it might be a "Tricolored" as he had seen two of these birds less than five months before in N.E. Florida. We eased back from the shore so that the high grass would shield us and walked up the lake. We then cut back towards the lake's edge and could see the head and long neck above the grass as it looked at us from some 50 yards. The bird was facing slightly away so that we could not see the white stripe down the throat. Then it sprang into the air facing away and climbed steeply for some 30 ft. of altitude, then dropped back down to a stump about 75 yards off. From the rear view while climbing the top of the head and the neck appeared bright blue to the writer, and the wings seemed medium gray with a good bit of blue in them. On the stump it gave us a side view. The bill was very dark. Where it joins the head a light color was visible as on the plate of heron heads in the first volume of the new A.O.U. series. No plume was seen on the head. On the back was a hand sized patch of cinnamon brown. The wind raised these up and outward proving them to be plumes. From this view Monk thought there was a decided blue cast to the wings and the upper back, instead of a dark or slate gray that we would expect. The legs seemed to be about the color of a weathered oak board, lighter than a Little Blue Heron. Its size was about that of a Little Blue or perhaps slightly larger. The bird was never in a position to show the large white areas under the wing of a Louisiana. We did not flush the bird again as we left it with hope that others might get to see it. Weather was hot, the sky 95% covered with thin clouds and light was bright for these conditions. We stayed with the bird from about 2:45 to 3:30 P. M. Observations were through 7 X 35, 8 X 30, and 16 X 50 binoculars.

HENRY E. PARMER, 3800 Richland Ave., Nashville 5, Tenn.

## BOOK REVIEWS

SEABIRDS IN SOUTHERN WATERS. — by Prince Philip, Duke of Edinburgh. 62 pages plus more than 80 photographs by the author and eight bird paintings by Commander A. M. Hughes, R.N. Harper and Row, publishers, 49 East 33rd Street, New York 16, N. Y. $3.95.

Prince Philip relates very vividly and interestingly his ornithological experiences on two expeditions aboard the Royal Yacht **Britannia.** The first in 1956-1957, took him from Kenya to Malaya, New Zealand, Antarctica, around Cape Horn to the Falkland Islands, South Georgia and other islands to St. Helena; the second by way of the islands of the Pacific through the Panama Canal to Bermuda. While traversing the long stretches of open sea their only visible companions were the sea birds in which he became interested. He began trying to identify and photograph them. Up to this time the only birds he knew, except the common game birds, he would have recognized as sparrows, seagulls and ducks.

Fortunately there was a dark room on the yacht so that the results of his efforts could be determined in a very short time. Since most of the birds were black and white or gray all photographs were taken in black and white. At the time, no thought was given to the possibility of publication or more photographs would have been taken. Most of the birds represented here have been photographed so infrequently that he was persuaded that they would be of interest to people who like birds.

The book is by no means a scientific ornithological work nor is it a comprehensive collection of all the species that inhabit the areas traversed. For convenience the pictures have been arranged in sequence progressively from the tropical seas toward the antarctic and not in sequence of the journeys. Maps showing the routes followed and many of the little known places visited are inside the front and back covers. A section following the photographs is devoted to brief descriptions and habits of the birds, the paragraphs bearing corresponding numbers with the photographs.

LEE R. HERNDON.

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THE LIFE OF BIRDS. — By Joel Carl Welty. 546 pp. illustrated with 129 line drawings, 99 photographs and a total of 90 maps, charts and diagrams. Alfred A. Knopf, Inc., 501 Madison Ave., New York 22, N. Y. 1963. $12.95.

The Life Of Birds is unlike most bird books in that it was not designed for field identification where the birds are listed in taxonomic order, accompanied by brief descriptions to assist the student in the identification of one species from another which may possess some common characteristics. This book was designed to present the basic biological characteristics of birds and through its presentation instill in the reader an intense desire to learn more of the fundamentals of all forms of bird life.

More than 8,000 references have been consulted and the material screened for authenticity and worthiness of inclusion in the text. Only about ten per cent of the references were of sufficient interest to be quoted or listed in the bibliography.

Many of the remarkable adaptations which equip birds for survival in the particular niche of preference, with regard to geography, climate, habitat, locomotion, food, enemies and many other peculiarities are discussed and specific instances cited in many cases. Many questions have arisen, some of which have been answered, others are being worked upon, still others remain unanswered. In some cases the unique methods used to arrive at the solutions are discussed.

The first chapter entitled "Birds as Flying Machines" tells how and why birds are adapted to the types of flight peculiar to a given species. The shape of the body, the relative position of the appendages on the body, relative size and shape of wings, structure of skeleton and energy supply make the bird a much more efficient machine than man has been able to devise. Some are adapted for short flights, others are equipped for long sustained flights, such as migration, others for soaring, where very little energy is required; some for relatively slow flights where still others for very rapid flight as in pursuit of food on the wing while still others are flightless although they possess wings.

All the known kinds of birds have been classified into more than 8,600 species and it is estimated that less than one per cent remains unclassified. The various characteristics which form the basis of classification are mentioned, such as mandibles, wings and feet to mention only a few of the more obvious variations. Adaptations for securing food, nest building, flightlessness, and various types of flight, running, swimming, diving and perching are characteristics which assist in classification. A hypothetical family tree is given, showing possible relationships of the various classes.

In all, twenty-three chapters compose the book. Titles of the remaining chapters are: Skin, Scales, Feathers and Colors; Bones and Muscles; Brain, Nerves, and Sense Organs; Food and Digestion; Blood, Air and Heat; Excretion, Reproduction and Photoperiodism; Behavior; Social Behavior; Songs, Calls and Other Sounds; Territory; Courtship and Mating Habits; Incubation and Brood Parasitism; The Care and Development of Young; The Numbers of Birds and Their Regulation; The Ecology of Birds; Flight; Migration and Orientation; The Origin and Evolution of Birds.

The book is factual, easily understandable to anyone who has had a course in general biology. It is quite free of technical terms and any section of it can be read independently from others without losing continuity. For the student who is only mildly interested in the biology of birds this book would surely stimulate that interest and since it contains the most up-to-date material available, in condensed form it would be a valuable addition to any library, private or public.

LEE R. HERNDON.

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Dr. James T. Tanner, of the University of Tennessee, Dept. of Zoology and Entomology, accompanied by his son, David spent the summer of 1962 in Mexico studying the status, habits and requirements of the Imperial Woodpecker of Mexico. They penetrated much farther into Indian territory than they had expected but did not find any Imperial Woodpeckers. They are becoming extinct faster than anticipated. He did learn enough about their causes of extinction and present status to prepare a short paper which has been submitted to THE AUK for possible publication.

The trip was supported by grants from the American Museum of Natural History and the International Committee for Bird Preservation.

LEE R. HERNDON.

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VOL. 34 MARCH 1963 NO. 1

## ANNUAL AUTUMN HAWK COUNT 1962

### By THOMAS W. FINUCANE

Seven major contributions were made to the T.O.S. Hawk Project in the fall of 1962, as follows: Fred Behrend, in the high mountains along the Tenn.-N.C. border; the Greeneville Chapter, mainly on the Rogersville-Kyles Ford Fire Tower; Tom Odom, on the River (Bays) Mt. Fire Tower; the Chattanooga group, especially on Elder Mt.; Oliver Irwin, Memphis; Maxie Swindell, Knoxville; Holmes Rolston, plus Abingdon and Kingsport watchers, on the Mendota Fire Tower. In addition, particularly interesting reports came in from Enno van Gelder, Bristol, and James Tanner, Knoxville.

The total count was about 6300, with 5915 Broad-winged Hawks, equal to the 1961 count of this species. The peak day for Broadwings was Sept. 22. On this day 2379 hawks were counted from the Mendota Fire Tower Knob, a new record for this lookout, and 489 were counted from Elder Mt. Even without these large counts Sept. 22 was the center of the hawk data this year and remains the average peak date, accumulated since 1949. The count of Red-tailed Hawks was about 190 last fall, a little above the 1961 count. The increase was from a contribution by Maxie Swindell, who saw flights of 23, 35, and 36. Oliver Irwin is listed as having seen 63 Redtails, fewer than in 1961, but he started observing earlier in the season and recorded 284 Broadwings. The counts of accipiters seem to be declining, especially the Sharp-shin count. The count of eagles was about normal; no immatures were noted, but five unidentified large birds were reported.

Except for the Mendota Fire Tower count, the Greeneville Chapter had the largest total, highlighted by 607 counted by Mrs. Christiansen and Mrs. Darnell, Sept. 19, on the Rogersville-Kyles Ford Knob. Next came the Knoxville reports. Besides the Red-tails, Maxie Swindell reported several large flights of Broadwings in the same location where 639 and 729 had been seen in 1960 and 1961. Jim Tanner and Bill Gallagher reported 156 from the Rockwood Fire Tower, Sept. 23, a new Lookout. Elder Mt. fell below the high standard of 1959-60-61. At the same time, Fred Behrend had at least five good days of hawk migration in the high mountains, after four lean years.

There were two periods of clouds and rain in our territory during the Broadwing migration and even more rain in areas from which we might expect our migrants to come. There were five cold fronts, mostly accompanied by rain. October was abnormally warm, according to Oliver Irwin; this is his explanation for his relatively poor count of Red-tailed Hawks this year. On the whole, it can be said that 1962 was an interesting year for the T.O.S. Hawk project.

JUN 4 1963

## NOTES

(The item numbers are from the left-hand column in the table).

2. Aug. 25—Bald Eagles migrate early. These two were whirling around each other and slowly drifting SW over the valley south of Holston Mt.

9-15. Sept. 15 & 16 were blanketed by clouds, fog, and rain. Conditions were worse on Sunday, Sept. 16, and on both days worse in the north and east. Tommy and Dan Finucane camped on the Mendota Fire Tower Knob from Saturday morning to Sunday morning but saw only a few vultures. Tom Odom saw 8 Broadwings in 9 hr., 23 miles southwest, and Mr. & Mrs. West counted 35 (and a Bald Eagle) on Elder Mt., near Chattanooga. On Sunday, however, no counts were made. On Monday, Sept. 17, a front moved across the State, from west to east and left fair weather behind it, although clouds and rain continued one more day northeast of our territory, in areas which feed migrants into the Mendota Fire Tower area, and rain lingered in the neighborhood of Bristol, Sept. 17.

17. Sept. 17—The total so far was 123 Broadwings, until Mrs. Swindell added 480 and Oliver Irwin 22 in coincidence with the Sept. 17 frontal movement. Oliver Irwin commented as follows: "12 plus, over uptown crowded streets at 12:23—moving SW, directly over 90 deg. meridian marker at post office. A major flight possible 11:00 to 12:15, but I was occupied keeping business appointments and eating. The wave of activity occurred at the moment of dry-air front's passage."

20. Sept. 18—"The early morning was rather cold and very clear after three days of rain; winds were rather strong, NW. I expected that the Broadwings would be flying. By mid-day, winds had died down noticeably and temperatures were up some." From 9:00 a.m. to 3:00 p.m., Mr. Rolston tabulated only 22 Broadwings.

21. Charlotte Finucane was parked in her automobile while Tommy was recovering some camping gear left on the Mendota Knob two days before. At 5:00 p.m. she saw 21 Broadwings, which combined with Mr. Rolston's 22, made the score 43 for the Mendota Fire Tower Lookout for Sept. 18.

23. Sept. 19—Mrs. Darnell and Mrs. Christiansen reached the Rogersville Fire Tower gap before 9:00 a.m. and made the second largest count of the 1962 project, 607 hawks. Mrs. Darnell commented: "The first 105 were counted flying low over the parking area; we got out of the car counting hawks and wishing we could have gotten there sooner, but I didn't get off duty until 7:15. The day was ideal—good overcasting of thin, white clouds. No doubt we missed many hawks, for they were flying low, high, and up from the valleys near us. We needed more counters. We had a wonderful time! The Osprey was flying low near the tower when we arrived."

29. Sept. 22—This was the best day's count of hawks for Elder Mt. for 1962. All but 2 of the 489 hawks were counted between 10:30 a.m. and 1:00 p.m.; the observers left at 2:30. Best day's counts for this lookout in '59, '60, and '61 were 863, 4985, and 1814.

31. Sept. 22—The Golden Eagle was a beautiful adult bird; it made three large circles below the observer. The gold on its head and neck flashed in the morning sun (about 11:15 a.m.). Four counts at this lookout by Tom Odom gave a total of 69 hawks, in 30 hr. of observing, but because of bad weather and other odd features of the season, we decided the lookout had not been given a fair test. On dead days the Broadwings seem to

stay above the Clinch and do not head south toward Bays Mt. (from the Mendota Fire Tower).

32. Sept. 22 gave the Mendota Fire Tower Lookout its record of 2379, exceeded only twice in the history of the T.O.S. Hawk Count. The day started cool, with a light south breeze. Holmes Rolston counted only 30 Broadwings, 9:00 a.m. to noon, a steady flight of 3 to 7 hawks per half hour. By noon it was hot and the breeze had died. At 2:30 the count reached 220, and during the next half hour two Ospreys were sighted, but no Broadwings. The sky was clear except for small clouds repeatedly forming and dissolving over the knobs. The sky, the date, and the absence of wind were ideal for the Mendota Fire Tower Lookout; we said that 222 from 9:00 a.m. to 3:00 p.m. was not enough.

Then the Broadwings came, and we compiled four consecutive half-hour totals as follows: 416, 394, 870, 469. Mr. Rolston gave complete details on the report form, front and back, showing the method used in the count, which he and Charlotte Finucane kept separately, with good agreement. In contrast to large flights recorded in other places, these hawks were very high. The 870 Broadwings (4:00 to 4:30 p.m.) included a formation of 800, as I counted it, plus two or three stragglers. It was long and thin, but compact, averaging about three hawks in width. I spotted it through my binocular and dropped down on my back to count. There was no wing movement, no circling, and I can remember no changes in position, lateral or front and back. Wings were not fully extended. The flight passed right over the zenith and could not have been counted from the tower. Mr. Rolston estimated it was a mile or more in length.

Of the 469 counted between 4:30 and 5:00 p.m., Mr. Rolston wrote: "These were still high but not quite so high as before, and they flew in a wider pattern, both over the tower and in the sky to the south, making counting more difficult."

33. Sept. 22—From a station 15 mi. ENE of the Mendota Fire Tower Knob and 1223 ft. higher, Enno and Roger van Gelder had a total of 72 hawks. After 2½ hr. of no count at all, he had 67 between 2:30 and 3:00 p.m. "The three groups seen between 2:30 and 3:00 p.m. spiraled and milled upward to very high altitude, where they appeared mere specks in the sky, before heading over Clinch Mt., the Ridge which leads to Mendota Fire Tower." They could have dropped 100 ft./mi. and still be mere specks over the Mendota Fire Tower. We should have compared group numbers. Mr. Rolston recorded three consecutive groups passing over the Mendota Fire Tower between 3:00 & 3:30 p.m. The interesting feature of this report is that it shows that the whole large flight over the Mendota Fire Tower may have come from some other direction. Between 3:00 and 4:00 p.m. no hawks passed the tower on Old Brumley.

34. This is a summary of observations by Oliver Irwin on days when the count was small. It is interesting to note that the flights over Memphis are large enough to give significant response to the factors which are important in migration study, particularly since a daily record is kept. The reports include a complete description of the weather and some interesting miscellaneous observations. The Red-tailed Hawks in this item were seen scattered through October. Mr. Irwin's total hawks for the season was 375, which was used as a basis for calculating the number of Red-tails.

In this report the season started with the departure of the Miss. Kite: "A few small flocks of migrating Mississippi Kites were noticed over woodlands in late August, but by Sept. 5, after a drop to 55 deg., the last

# HAWK OBSERVATIONS FALL OF 1962

| No. | Date | Ob. | h. | Lookout | Alt. | Wind | F | Sky | Shrp | Coop | Rdtl | Rdsh | Brdw | Mrsh | Ospr | SpH | Egl | Uni-dent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8/19 | BD | 9 | Round Bald | 5800 | 3 SW | 6 | PC | .... | .... | .... | .... | .... | .... | .... | .... | .... | 7 |
| 2 | 25 | FE | 3 | Holston Mt FT | 4350 | .... | .... | SC | .... | .... | 2 | .... | 14 | .... | .... | .... | 2B | 3 |
| 3 | 9/2 | BD | 9 | Hump Mt | 4700 | 2-3 NW | 7 | PC | 3 | 1 | .... | .... | .... | 1 | .... | 1 | .... | 4 |
| 4 | 3 | B | 6½ | Holston Mt FT | 4350 | 2-3 NW-N | 7 | PC | 2 | .... | .... | .... | 2 | .... | .... | 1 | .... | 1 |
| 5 | 8 | FDk | 7 | Mendota FT | 3000 | 6-8 SE | 6 | F | .... | 1 | 2 | .... | 17 | .... | 1 | 1 | .... | 4 |
| 6 | 9 | B | 2 | Roan Mt | 4400 | 2-3 S | 6-7 | LC | .... | 1 | 1 | .... | 1 | .... | .... | .... | .... | .... |
| 7 | 9 | N | 5 | Rogrsvl FT | 3000 | 5 SE-N | 7 | CS | .... | .... | .... | .... | 15 | .... | .... | 1 | .... | 1 |
| 8 | 12 | R | 5 | Mendota FT | 3000 | 0-3 N | hot | EC | .... | .... | .... | .... | 31 | .... | .... | .... | .... | 1 |
| 9 | 15 | W | 4 | Elder Mt FT | 1880 | .... SE | .... | C | .... | .... | .... | .... | 35 | .... | .... | .... | 1B | .... |
| 10 | 15 | O | 9 | River Mt FT | 2395 | 2-3 SE | 7-8 | CS | .... | .... | .... | 2 | 8 | .... | .... | 3 | .... | .... |
| 11 | 15 | N | — | 9 mi NW Grnvl | 1100 | .... | 8 | C | .... | 3 | 3 | .... | .... | 1 | .... | 2 | .... | .... |
| 12 | 15 | DT | 8 | Mendota FT | 3000 | .... | .... | CR | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| 13 | 16 | B | 7½ | Holston Mt FT | 4350 | 3-4 S | 6 | CR | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| 14 | 16 | N | — | Rogrsvl FT | 3000 | .... | .... | HR | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| 15 | 16 | O | 5 | River Mt FT | 2395 | 2-3 SE | 6 | HF | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| 16 | 17 | I | — | Memphis | | 3 NE | 7-9 | | .... | .... | .... | .... | 22 | .... | .... | 1 | .... | .... |
| 17 | 17 | MS | 3 | Knox Co | 900 | 3 NW | 7-8 | PC | .... | .... | .... | .... | 480 | .... | .... | .... | .... | .... |
| 18 | 17 | B | 5½ | Holston Mt FT | 4350 | 3-4 NW-W | 6 | FC | .... | .... | 1 | .... | 5 | .... | .... | .... | .... | 1 |
| 19 | 18 | B | 7½ | Jane Bald | 5800 | 2-6 NW-N | 4-5 | CC | 1 | .... | 5 | .... | 48 | 1 | .... | 1 | .... | .... |
| 20 | 18 | R | 6 | Mendota FT | 3000 | 4 NW | 6-7 | F | 2 | .... | 1 | .... | 22 | .... | .... | 1 | .... | 1 |
| 21 | 18 | FE | — | Mend FT Gap | 2700 | .... | .... | | .... | .... | .... | .... | 21 | .... | .... | .... | .... | 2 |
| 22 | 19 | MS | — | Knox Co | 900 | 0-2 WNW | 5-8 | F | .... | .... | .... | .... | 14 | .... | .... | .... | .... | .... |
| 23 | 19 | DC | 5 | Rogrsvl FT | 3000 | 2 S | 6-7 | F | .... | .... | .... | 2 | 604 | .... | 1 | .... | .... | .... |
| 24 | 19 | B | 7 | Jane Bald | 5800 | 1-3 SSE | 5 | CC | .... | .... | .... | .... | 66 | .... | .... | 2 | .... | .... |
| 25 | 20 | MS | — | Knox Co | 900 | 0-2 NNE | 5-8 | F | .... | .... | .... | .... | 103 | .... | .... | .... | .... | .... |
| 26 | 20 | B | 6 | Beech Mt | 5520 | 5 NW | 5 | TC | .... | .... | 2 | .... | 8 | .... | .... | .... | .... | .... |
| 27 | 21 | I | — | Memphis | | .... | 5-8 | F | .... | .... | .... | .... | 21 | 1 | .... | .... | .... | .... |
| 28 | 21 | B | 6 | Hump Mt Top | 5587 | 4-5 S | 4-5 | CC | 1 | .... | 4 | .... | .... | .... | .... | 1 | .... | 2 |
| 29 | 22 | W | 5 | Elder Mt FT | 1880 | .... ENE | .... | PC | .... | 2 | .... | .... | 486 | .... | 1 | .... | .... | .... |
| 30 | 22 | BB | — | Eliz-Res Hill | 1500 | 2 SW | 6 | F | .... | .... | .... | .... | 25 | .... | .... | .... | .... | .... |
| 31 | 22 | O | 7 | River Mt FT | 2395 | 2-3 SE | 5-7 | F | .... | .... | 1 | .... | 16 | .... | 1 | .... | 1C | .... |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 | — | I | — | Memphis | | .... | .... | | 1 | .... | .... | .... | 44 | 1 | 2 | [illegible] | .... | .... |
| 35 | 23 | I | — | Memphis | | 2 SE | 6-8 | PC | .... | .... | 63 | .... | 24 | .... | .... | .... | .... | .... |
| 36 | 23 | Ch | 7 | Elder Mt FT | 1880 | .... NE | .... | SC | .... | .... | .... | .... | 104 | 1 | 1 | .... | .... | 2 |
| 37 | 23 | TG | 5 | Rockwood FT | 2100 | 1-3 E | .... | CC | 1 | .... | 2 | .... | 145 | .... | 1 | 2 | .... | 3 |
| 38 | 23 | Gr | 7½ | Rogrsvl FT | 3000 | 3 NE | 7-8 | F | .... | .... | .... | .... | 105 | .... | .... | .... | .... | .... |
| 39 | 23 | O | 9 | River Mt FT | 2395 | 3-6 NE | 5-7 | F | .... | .... | 1 | 1 | 32 | .... | 1 | .... | .... | .... |
| 40 | 23 | BL | 8 | Holston Mt FT | 4350 | 3-4 NE-E | 5-6 | PC | .... | .... | .... | .... | 14 | .... | .... | .... | .... | .... |
| 41 | 23 | FT | 4½ | Mendota FT | 3000 | 5-6 NE | 6 | SC | .... | 2 | .... | .... | 86 | 1 | .... | .... | .... | .... |
| 42 | 23 | VCB | 1½ | McQueens Kn | 3885 | 4-5 NW | .... | F | .... | 1 | .... | .... | 8 | .... | .... | .... | .... | 1 |
| 43 | 24 | L | 1 | Elder Mt FT | 1880 | .... | .... | | .... | .... | .... | .... | 23 | .... | .... | .... | .... | .... |
| 44 | 24 | B-F | 6 | Temple Hill FT | | 3 S | 5-6 | HC | 1 | .... | 1 | .... | 2 | .... | .... | .... | .... | 1 |
| 45 | 25 | B | 6 | Rich Mt FT | | 1-3 S | 5 | CR | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| 46 | 26 | I | 3½ | Memphis | | 3-5 NE | 8 | CT | .... | .... | .... | .... | 134 | .... | .... | .... | .... | .... |
| 47 | 26 | B | 2 | Camp Cr Bld FT | | 3-4 S | .... | HC | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| 48 | 27 | I | — | Memphis | | .... | .... | | .... | .... | .... | .... | 25 | .... | .... | .... | .... | .... |
| 49 | 27 | B | 6½ | Camp Cr Bld FT | | 3-5 W-SW | 4 | C | .... | .... | 1 | .... | 110 | .... | 1 | .... | .... | 2 |
| 50 | 28 | B | 7 | Rich Mt | | 3-4 NW | 4 | C | 1 | .... | .... | .... | 4 | .... | 1 | .... | .... | 1 |
| 51 | 29 | W | 2 | Elder Mt FT | 1880 | .... | .... | F | .... | 1 | 2 | .... | 1 | .... | .... | .... | .... | .... |
| 52 | 29 | FDn | 9 | Mendota FT | 3000 | 0-2 W | 4 | F | 2 | 2 | .... | 1 | 179 | .... | 1 | .... | .... | 6 |
| 53 | 30 | B | 7 | Roan Hi Bluff | 6250 | 2-3 SE | 4 | F | .... | .... | .... | 1 | 44 | .... | .... | .... | .... | 6 |
| 54 | 30 | NL | 5 | Meadow Cr FT | | 2 NE | 7 | CM | 2 | .... | .... | .... | 105 | .... | 1 | 2 | .... | 2 |
| 55 | 30 | F | 7 | Mendota FT | 3000 | 3 SE | hot | F | 2 | 1 | 2 | 3 | 106 | .... | .... | 1 | 2 | 2 |
| 56 | 30 | J | — | Iron Mt, Va. | | .... | .... | | .... | .... | .... | .... | 12 | .... | .... | .... | .... | .... |
| 57 | — | MS | — | Knox Co | 900 | .... | .... | | 1 | 2 | .... | 3 | 5 | .... | 1 | 5 | .... | .... |
| 58 | 10/1 | R | 4 | Mendota FT | 3000 | 1 S | wrm | F | .... | 3 | .... | .... | 38 | .... | 1 | .... | .... | 3 |
| 59 | 3 | CT | — | Chattanooga | 900 | .... | .... | | .... | .... | .... | .... | 34 | .... | .... | .... | .... | .... |
| 60 | 5 | C | — | Chattanooga | 900 | .... | .... | | .... | .... | .... | .... | 13 | .... | .... | .... | .... | 4 |
| 61 | 8 | I | — | Memphis | | .... | 6-8 | | .... | .... | .... | .... | 14 | .... | .... | .... | .... | .... |
| 62 | 23 | MS | — | Knox Co. | 900 | 3 S-NW | 5-6 | F | 1 | .... | 23 | .... | .... | .... | .... | .... | .... | .... |
| 63 | 31 | MS | 2 | Knox Co. | 900 | 0-2 NW | 5-6 | PC | .... | .... | 35 | .... | .... | .... | .... | .... | .... | .... |
| 64 | 11/4 | MS | — | Knox Co. | 900 | 0-2 WNW | 5 | | .... | .... | 36 | .... | .... | .... | .... | .... | .... | .... |
| | TOTALS | 252 | | | | | | | 21 | 20 | 190 | 14 | 5915 | 7 | 19 | 30 | 6 | 64 |

No. 39, 1 Peregrine, 1 Pigeon Hawk; No. 52, 1 Peregrine; No. 54, 1 Rough-legged Hawk.

# HAWK OBSERVATIONS FALL OF 1962

| No. | Date | Ob. | h. | Lookout | Alt. | Wind | F | Sky | Shrp | Coop | Rdtl | Rdsh | Brdw | Mrsh | Ospr | SpH | Egl | Uni-dent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8/19 | BD | 9 | Round Bald | 5800 | 3 SW | 6 | PC | .... | .... | .... | .... | .... | .... | .... | .... | .... | 7 |
| 2 | 25 | FE | 3 | Holston Mt FT | 4350 | .... | .... | SC | .... | .... | 2 | .... | 14 | .... | .... | .... | 2B | 3 |
| 3 | 9/2 | BD | 9 | Hump Mt | 4700 | 2-3 NW | 7 | PC | 3 | 1 | .... | .... | .... | 1 | .... | 1 | .... | 4 |
| 4 | 3 | B | 6½ | Holston Mt FT | 4350 | 2-3 NW-N | 7 | PC | 2 | .... | .... | .... | 2 | .... | .... | 1 | .... | 1 |
| 5 | 8 | FDk | 7 | Mendota FT | 3000 | 6-8 SE | 6 | F | .... | 1 | 2 | .... | 17 | .... | 1 | 1 | .... | 4 |
| 6 | 9 | B | 2 | Roan Mt | 4400 | 2-3 S | 6-7 | LC | .... | 1 | 1 | .... | 1 | .... | .... | .... | .... | .... |
| 7 | 9 | N | 5 | Rogrsvl FT | 3000 | 5 SE-N | 7 | CS | .... | .... | .... | .... | 15 | .... | .... | 1 | .... | 1 |
| 8 | 12 | R | 5 | Mendota FT | 3000 | 0-3 N | hot | EC | .... | .... | .... | .... | 31 | .... | .... | .... | .... | 1 |
| 9 | 15 | W | 4 | Elder Mt FT | 1880 | .... SE | .... | C | .... | .... | .... | .... | 35 | .... | .... | .... | 1B | .... |
| 10 | 15 | O | 9 | River Mt FT | 2395 | 2-3 SE | 7-8 | CS | .... | .... | .... | 2 | 8 | .... | .... | 3 | .... | .... |
| 11 | 15 | N | — | 9 mi NW Grnvl | 1100 | .... | 8 | C | .... | 3 | 3 | .... | .... | 1 | .... | 2 | .... | .... |
| 12 | 15 | DT | 8 | Mendota FT | 3000 | .... | .... | CR | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| 13 | 16 | B | 7½ | Holston Mt FT | 4350 | 3-4 S | 6 | CR | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| 14 | 16 | N | — | Rogrsvl FT | 3000 | .... |  | HR | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| 15 | 16 | O | 5 | River Mt FT | 2395 | 2-3 SE | 6 | HF | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| 16 | 17 | I | — | Memphis |  | 3 NE | 7-9 |  | .... | .... | .... | .... | 22 | .... | .... | 1 | .... | .... |
| 17 | 17 | MS | 3 | Knox Co | 900 | 3 NW | 7-8 | PC | .... | .... | .... | .... | 480 | .... | .... | .... | .... | .... |
| 18 | 17 | B | 5½ | Holston Mt FT | 4350 | 3-4 NW-W | 6 | FC | .... | .... | 1 | .... | 5 | .... | .... | .... | .... | 1 |
| 19 | 18 | B | 7½ | Jane Bald | 5800 | 2-6 NW-N | 4-5 | CC | 1 | .... | 5 | .... | 48 | 1 | .... | 1 | .... | .... |
| 20 | 18 | R | 6 | Mendota FT | 3000 | 4 NW | 6-7 | F | 2 | .... | 1 | .... | 22 | .... | .... | 1 | .... | 1 |
| 21 | 18 | FE | — | Mend FT Gap | 2700 | .... | .... |  | .... | .... | .... | .... | 21 | .... | .... | .... | .... | 2 |
| 22 | 19 | MS | — | Knox Co | 900 | 0-2 WNW | 5-8 | F | .... | .... | .... | .... | 14 | .... | .... | .... | .... | .... |
| 23 | 19 | DC | 5 | Rogrsvl FT | 3000 | 2 S | 6-7 | F | .... | .... | .... | 2 | 604 | .... | 1 | .... | .... | .... |
| 24 | 19 | B | 7 | Jane Bald | 5800 | 1-3 SSE | 5 | CC | .... | .... | .... | .... | 66 | .... | .... | 2 | .... | .... |
| 25 | 20 | MS | — | Knox Co | 900 | 0-2 NNE | 5-8 | F | .... | .... | .... | .... | 103 | .... | .... | .... | .... | .... |
| 26 | 20 | B | 6 | Beech Mt | 5520 | 5 NW | 5 | TC | .... | .... | 2 | .... | 8 | .... | .... | .... | .... | .... |
| 27 | 21 | I | — | Memphis |  | .... | 5-8 | F | .... | .... | .... | .... | 21 | 1 | .... | .... | .... | .... |
| 28 | 21 | B | 6 | Hump Mt Top | 5587 | 4-5 S | 4-5 | CC | 1 | .... | 4 | .... | .... | .... | .... | 1 | .... | 2 |
| 29 | 22 | W | 5 | Elder Mt FT | 1880 | ... ENE | .... | PC | .... | 2 | .... | .... | 486 | .... | 1 | .... | .... | .... |
| 30 | 22 | BB | — | Eliz-Res Hill | 1500 | 2 SW | 6 | F | .... | .... | .... | .... | 25 | .... | .... | .... | .... | .... |
| 31 | 22 | O | 7 | River Mt FT | 2395 | 2-3 SE | 5-7 | F | .... | .... | 1 | .... | 16 | .... | 1 | .... | 1G | .... |
| 32 | 22 | R-F | 8 | Mendota FT | 3000 | 0 S | [illegible] | CC |  |  | 2 | 1 | 2360 |  | 4 | .... |  | 3 |
| 33 | 22 | V | 4½ | Hansvl Aero T | 4223 | 5 SW | 6 | F |  |  |  |  | 71 |  |  |  |  | 1 |
| 34 | — | I | — | Memphis |  |  |  |  | 1 |  |  |  | 44 | 1 | 2 | 6 |  |  |
| 35 | 23 | I | — | Memphis |  | 2 SE | 6-8 | PC | .... |  | 63 |  | 24 |  |  |  |  |  |
| 36 | 23 | Ch | 7 | Elder Mt FT | 1880 | ... NE | .... | SC | .... |  |  |  | 104 | 1 | 1 |  | .. | 2 |
| 37 | 23 | TG | 5 | Rockwood FT | 2100 | 1-3 E | .... | CC | 1 | .... | 2 | .... | 145 | .. | 1 | 2 | .. | 3 |
| 38 | 23 | Gr | 7½ | Rogrsvl FT | 3000 | 3 NE | 7-8 | F | .... | .... | . | .... | 105 | .. | .... | .... | .... | .... |
| 39 | 23 | O | 9 | River Mt FT | 2395 | 3-6 NE | 5-7 | F | .... | .... | 1 | 1 | 32 | .... | 1 | .... | .... | .... |
| 40 | 23 | BL | 8 | Holston Mt FT | 4350 | 3-4 NE-E | 5-6 | PC | .... | .... | .. | .... | 14 | .... | .... | .... | .... | .... |
| 41 | 23 | FT | 4½ | Mendota FT | 3000 | 5-6 NE | 6 | SC | .... | 2 | .. | .... | 86 | 1 | .... | .... | .... | .... |
| 42 | 23 | VCB | 1½ | McQueens Kn | 3885 | 4-5 NW | .... | F | .... | 1 | .... | .... | 8 | .... | .... | .... | .... | 1 |
| 43 | 24 | L | 1 | Elder Mt FT | 1880 | .... | .... |  | .... | .... | .... | .... | 23 | .... | .... | .... | .... | .... |
| 44 | 24 | B-F | 6 | Temple Hill FT |  | 3 S | 5-6 | HC | 1 | .... | 1 | .... | 2 | .... | .... | .... | .... | 1 |
| 45 | 25 | B | 6 | Rich Mt FT |  | 1-3 S | 5 | CR | .... | .... | .... | .... | ... | .... | .... | .... | .... | .... |
| 46 | 26 | I | 3½ | Memphis |  | 3-5 NE | 8 | CT | .... | .. | .... | .... | 134 | .... | .... | .... | .... | .... |
| 47 | 26 | B | 2 | Camp Cr Bld FT |  | 3-4 S | ... | HC | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| 48 | 27 | I | — | Memphis |  | .... | .... |  | .... | .... | .... | .... | 25 | .... | .... | .... | .... | .... |
| 49 | 27 | B | 6½ | Camp Cr Bld FT |  | 3-5 W-SW | 4 | C | .... | .... | 1 | .... | 110 | .... | 1 | .... | .... | 2 |
| 50 | 28 | B | 7 | Rich Mt |  | 3-4 NW | 4 | C | 1 | ... | .... | .... | 4 | .... | 1 | .... | .... | 1 |
| 51 | 29 | W | 2 | Elder Mt FT | 1880 | ... | .... | F | .... | 1 | 2 | .... | 1 | .... | ... | .... | .... | .... |
| 52 | 29 | FDn | 9 | Mendota FT | 3000 | 0-2 W | 4 | F | 2 | 2 | .... | 1 | 179 | .... | 1 | .... | .... | 6 |
| 53 | 30 | B | 7 | Roan Hi Bluff | 6250 | 2-3 SE | 4 | F | .... | ... | .... | 1 | 44 | .... | .... | .... | .... | 6 |
| 54 | 30 | NL | 5 | Meadow Cr FT |  | 2 NE | 7 | CM | 2 | .... | .... | .... | 105 | .... | 1 | 2 | .... | 2 |
| 55 | 30 | F | 7 | Mendota FT | 3000 | 3 SE | hot | F | 2 | 1 | 2 | 3 | 106 | .... | .... | 1 | 2 | 2 |
| 56 | 30 | J | — | Iron Mt, Va. |  | .... | .... |  | .... | .... | .... | .... | 12 | .... | .... | .... | .... | .... |
| 57 | — | MS | — | Knox Co | 900 | .... | .... |  | 1 | 2 | .... | 3 | 5 | .... | 1 | 5 | .... | .... |
| 58 | 10/1 | R | 4 | Mendota FT | 3000 | 1 S | wrm | F | .... | 3 | .... | .... | 38 | .... | 1 | ... | .... | 3 |
| 59 | 3 | CT | — | Chattanooga | 900 | .... | .... |  | .... | .... |  | .... | 34 | .... | .... | .... | .... | .... |
| 60 | 5 | C | — | Chattanooga | 900 | .... | .... |  | .... | .... | .... | .... | 13 | .... | .... | .... | .... | 4 |
| 61 | 8 | I | — | Memphis |  | .... | 6-8 |  | .... | .... | .... | .... | 14 | .... | .... | .... | .... | .... |
| 62 | 23 | MS | — | Knox Co. | 900 | 3 S-NW | 5-6 | F | 1 | .... | 23 | .... | .... | .... | .... | .... | .... | .... |
| 63 | 31 | MS | 2 | Knox Co. | 900 | 0-2 NW | 5-6 | PC | .... | .... | 35 | .... | .... | .... | .... | .... | .... | .... |
| 64 | 11/4 | MS | — | Knox Co. | 900 | 0-2 WNW | 5 |  | .... | .... | 36 | .... | .... | .... | .... | .... | .... | .... |
|  | TOTALS | 252 |  |  |  |  |  |  | 21 | 20 | 190 | 14 | 5915 | 7 | 19 | 30 | 6 | 64 |

No. 39, 1 Peregrine, 1 Pigeon Hawk; No. 52, 1 Peregrine; No. 54, 1 Rough-legged Hawk.

straggler had left. Also, it is possible that Broad-winged Hawk arrivals displaced them, judging by battles high in the air. These two species often hunt large insects together on the wing in summer."

35-42. Sept. 23—Eight stations were active, with a total of 42½ hr., plus one duration unspecified. Everyone had hawks but not as many as expected. The highest count was at the fire tower near Rockwood—154. The 2369 Broadwings seen over the Mendota Fire Tower the day before seems to have eluded all other stations. This is interesting but makes a dull day in the field. The weather was good, although the wind was too high for the Mendota Fire Tower Lookout. Tom Odom had one Peregrine, before 8:30 a.m., and about an hour later a Pigeon Hawk tried to get into the tower with him. It was his best day, with 33 before 10:00 a.m. but only 4 during the remaining 7 hrs.

46. Sept. 26—Oliver Irwin wrote: "Sept. 26 was my best day in 1961, and in 1962 it was the best day I have experienced with hawk watching. At 9:30 a.m. the sky changed from layers of scattered overcast, some light showers, fog, ceiling 12,000, visibility 2 mi.; to broken, scattered unlimited ceiling, smoke and haze, visibility 5 mi. The wind changed from 8 mph N to 10 mph NNE. Suddenly, at 9:30 a.m., there were so many hawks in the air that I had difficulty counting them all. They descended in formation overhead, through the light, misty clouds, two large flocks joining beneath a large thermal cloud formed by a column of warm air rising over the extensively paved area of the army depot. This open site is situated on the west end of a high ridge. These were Broad-winged Hawks pausing at 1800 ft. to soar beautifully in the sunlight. I counted 80 as they gathered into formation slowly and began to glide off swiftly SSW. Large thunderheads dotted the sky after 1:00 p.m."

53. These hawks were flying high. Besides five or more good days of observing in the high mountains, Mr. Behrend's program was hampered by clouds and rain, Sept. 24-28.

57. This is a presentation of the largest single day's totals of the various species from a report by Maxie Swindell with 29 entries, Sept. 17 to Dec. 21, excluding data already in the table. The original data give a complete account of the hawks close to the center of the Knox Co. census circle, and not far from where the Swindells live. The data, plus extensive observation by Pardue and others in past years at other stations around Knoxville, suggest that this station is far better than any other in the Knoxville area.

## SKY CODE

C—Cloudy; CC—Clear with cumulus; CM—Cirrus to cirrocumulus; CR—Clouds and rain; CS—Cirrus to stratus; CT—Cold-front thunderheads; EC—Exceptionally clear; F—Fair; HC—Heavy, low cloudiness; HF—Heavy fog; HR—Hard rain; LC—Low clouds; PC—Partly cloudy; SC—Scattered clouds; TC—Tremendous cumuli.

## KEY TO REPORTERS

B—Fred Behrend, Elizabethton; with BB, Mrs. Behrend; BD, Ken Dubke; BL, Linda Behrend. C—Mrs. Crownover, Chattanooga; with CT. Mrs. Tunsberg. Ch—Mr. & Mrs. Barr, Mrs. Crownover, O. P. Pitts, Theo Rogers, Mr. & Mrs. West, Chattanooga. DC—Mrs. Darnell and Mrs. Christiansen, Greeneville. F—Thomas Finucane, Kingsport; with FDn, Dan; FDk, Dick; FE, Charlotte, Bill, Joe, Bernard Emmet; FT, Tommy. Gr—Dr. Royal Spees, Mrs. Spees, Lynn, Karl, David, Wade Spees, Mrs. Darnell, Harry Roberts, Mrs. Nevius, Richard Nevius, Greeneville. I—Oliver Irwin, Memphis. J—John Tamblyn, Kingsport. L—Mr. Lawson, Chattanooga. N—Richard Nevius, Greeneville; with NL, W. A. Lauderdale. MS—Maxie Swindell, Knoxville. O—Tom Odom, Kingsport. R—Holmes Rolston, Bristol. TG—Jim Tanner and Bill Gallagher, Knoxville. V—Enno van Gelder and Roger; with VCB, Wallace Coffey, Fletcher Bingham, Rockwell Bingham, Mr. & Mrs. Gibson P. Vance, Bristol. W—Gene and Adele West, Chattanooga.

Temperatures are given in degrees F, divided by 10, and rounded off to one figure. Wind speeds are according to the Beaufort Wind Scale (THE MIGRANT **31**, 10, 1960).

## THE SEASON

MEMPHIS AREA. — The Penal Farm had nothing of interest last fall and little this winter. For several autumns, migrating Tree Swallows have avoided it (being across the river), no shorebirds, and not a wintering Lapland Longspur noted. Twelve Golden Plovers seen, Oct. 6, near Booker, Ark., one on Nov. 10 at Horseshoe Lake nearby, and at Lonoke, 1 to 3 on trips up to Dec. 2 (one left). Returning Goldens couldn't be found, Marion-Booker-Craft, Mar. 2 & 9, nor in the Slovac-Lonoke areas, Mar. 10, but the Henry Halbergs found 3 late on the 10th, at the Lonoke hatchery, after our two visits that day. 3 Greater Yellowlegs (HHs), a Lesser (BCs) and a flock of Pectorals also came in. 5 Least Sandpipers wintered at a drained reservoir near Marion, Ark.; a Greater Yellowlegs was there Dec. 8, and a Dowitcher (sp?), Dec. 1. Up to 40 of the latter at Lonoke, dwindling to 12 there on Dec. 2. Common Snipe common in East Arkansas spots and, Nov. 18, a total of 1200 in Lonoke area.

The only Short-eared Owl seen was one north of Slovac, dusk, Nov. 18. I'm still looking for the Burrowing Owl in Tennessee but stumbled on the species in Arkansas with Mrs. Coffey, Alice Smith, Franklin and Ginny McCamey. I found 2, NE of Lonoke, and 1 NW of Carlisle, Ark, Oct. 28. The two fields, former Sprague's and Smith's sites are only four miles apart, and burrows (of several weeks possibly) were found in 3 small, low hillocks or "pimple mounds" at each field. Alternate checks were made thru Dec. 2 when 2 were seen at the second field. Only one on the Christmas Count, at field 2. Little Rock observers checked subsequently; 2 at Field 2, Feb. 24 (Dr. W. P. Scarlett) were the last recorded. None found Mar. 10 (BCs, HHs, WPS, AS). The only previous state record was a banding recovery at nearby England, Feb. 15, 1937. Mrs. Coffey and I worked various further areas, without success.

Tree Swallow fall migration across the river, as usual, thru October. Nov. 10, 2 at Bruin's (Porter Lake-Horseshoe area); a flock of 250 plus over Moon Lake, Miss., Nov. 25, our latest flock, but 2 days short of Burdick's 3 at Old River, Hughes, Ark. in 1938. Soras and Short-billed Marsh Wrens uncommon during rice combining, the wren later, to Dec. 2. My first fall Bobolinks in the area were 15 at Booker, Sept. 23 (none there Sept. 30, or Banks-Tunica, Miss., Sept. 29). Ziegler reported the species just south, Oct. 16 & 18, 1952. — Individual Orange-crowned Warblers were found by 3 observers on our Memphis Christmas Count but not a one in SW Miss., Dec. 30 (BCs). Helen Dinkelspiel had one in Overton Park, Oct. 31. The Western Meadowlark down from last year, Brewer's Blackbird in usual small numbers, including 11, west of Jonesboro, Ark., Mar. 3.

Dennis Carter (Boulder, Colo.) found 8 Chipping Sparrows in Tishomingo State Park, Miss., Dec. 17. A banded Harris' Sparrow was seen, from January (no dates) at the Charles Seahorns, Germantown, Tenn.; the species continues almost rare. My favorite "airfield" species have almost quit appearing this far east in recent years. Two Sprague's Pipits on the Texarkana, Ark. airport, Nov. 24 (none on bottom pastures to eastward), and Smith's Longspurs, 5 on Grenada, Miss., airfield, Feb. 24, and 21 on Jonesboro, Ark., airfield Mar. 3, were my only records. The Memphis Penal Farm and Lonoke area covered at intervals, Hot Springs airfield, Nov. 22, and El Dorado airfield, on Nov. 24. The Lapland Longspur down,—none at Penal Farm or Booker, low at Lonoke; we missed Stuttgart airfield (usually good flocks) until Mar. 10,—none but probably had recently left. First fall record was one, Nov. 4, drained pond, Lonoke. Large flocks, Prairie County, NNW of Stuttgart, Dec. 2; 1800 and 800.

The first Purple Martin was seen here, Feb. 28 (Oliver Irwin).

BEN B. COFFEY, JR., 672 North Belvedere, Memphis 7, Tenn.

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COLUMBIA AREA. — Our fall bird count was made on the afternoon of Sept. 27, 1962 and the morning of Sept. 28. Doctors Mayfield, Gray, and Fuqua and families as usual were the participants. The weather was cool in early Sept. and some of the earlier migrating Warblers appeared to have passed on. Our total list included 90 birds of which only 13 were Warblers. Interesting species were 5 Canada Geese, 8 Nighthawks, 1 early Sapsucker, 20 Hummingbirds in the Arrow Lake Marsh feeding on fall flowers, both Long-billed and Short-billed Marsh Wrens, 1 fairly late Blue-gray Gnatcatcher, 3 Warbling Vireos, 1 Kentucky, and 3 Wilson's Warblers.

Other interesting findings thru the fall included American Bittern, Oct. 20, Snowgeese in flight Oct. 25, Lesser and Greater Yellowlegs and Least Sandpiper, Nov. 10. Large numbers of Hummingbirds until about Oct. 10, 2 Short-billed Marsh Wrens who remained thru the fall and winter months in this area, Black-Throated-green Warbler until Oct. 18. the first White-throat, Fox, Lincoln, Swamp, Song Sparrows, Oct. 20, Blue Goose on Arrow Lake, Nov. 11, large flocks of Nighthawks until Oct. 10.

The Harris Sparrow first observed Dec. 26 by G.R.M. on our Christmas count was seen off and on until about March 10. At one time the Gray family felt that an immature bird was present at their feeder along with the mature bird originally observed. A huge Blackbird roost was present on the southern border of Columbia on the north side of Rainey's hill. Estimates ranged from 500,000 to 1,000,000 birds with large numbers of Grackles, Starlings, Cowbirds, Red-Wings and Rustys. Robins were generally absent. Myrtle Warblers were rare to absent from mid Dec. until late Feb. Horned Grebes were seen Mar. 23 to Apr. 1. La.-Water Thrush arrived Mar. 23. Palm Warbler arrived Mar. 27 and also Black and White and Sycamore, arrived by Mar. 31.

We were pleased that Mrs. Goodpasture from Nashville could spend Sunday, Mar. 17 banding birds in the area. 63 birds were banded including 13 species but unfortunately we did not catch the Harris Sparrow.

GEORGE R. MAYFIELD, JR.

NASHVILLE AREA. — When one is just emerging from snow and ice, with the promise of spring in the air, it is easy to overlook the happenings of Fall. It is good to have record-keeping members to remind us that there was a Fall, and some good records.

H. E. Parmer reports that Bush's Lake was drained in September, and not completely filled until 11 November, and was frozen most of the winter from 13 December until late February. There were several records of Golden Plovers at Bush's from 19 September (2) until 16 October (3) with a peak of 20 birds 26 September; a flock of Lesser Yellowlegs 25 September; flocks of Pectoral Sandpipers from 25 September (64) through 2 November (1) with a peak of 110 on 26 September (HEP). Also at Bush's Lake, 1 to 4 Stilt Sandpipers 14 to 28 September, 2 Sanderlings 14 September, 1 Forster's Tern 14 & 15 September, 1 Semi-palmated Plover and 3 Common Terns 15 September (HEP).

Ducks were very scarce on both Bush's Lake and Old Hickory Lake in December and January (HEP) (LOT), but have become more plentiful since the first of February, particularly at Old Hickory (LOT). Only 5 species of ducks were counted on our Christmas Count, with a total of 105 birds. This doesn't include the Old Hickory population as that is not in our Count area. Mallards and Black Ducks have been at Bush's all the winter, (HEP), and Horned Grebes and Pied-billed Grebes have been at Old Hickory all the winter (LOT), and a total of 14 species of ducks have been at this location at intervals through the winter. (LOT) reports that the duck population at Old Hickory has been about the same as last year, with no appreciable reduction in numbers noticeable.

Ten species have been reported from Bush's, but in reduced numbers, with nothing of especial note except 1 mature male Surf Scoter 20 November (HEP). Lesser Scaup which are usually at Bush's through the winter have been almost non-existent. Radnor Lake has had almost no ducks, probably because the water has been very low, and completely frozen a good bit of the winter. The Herring Gull was late arriving 21 November, but has been about as usual in numbers 25 - 30 (HEP) (LOT). The Ring-billed population has been about as usual 250-300 (HEP) (LOT). Several noteworthy late dates were reported last fall: a Wood Thrush was seen drinking at a pool in the William Bells' yard 3, 4 & 6 November (on the 6th the temperature was 25). This is two weeks later than latest recorded date for 10 years, insofar as is known by this writer, and three weeks later than average; 1 Solitary Vireo was found dead at WSM Tower 22 October (HEP); 1 Ruby-throated Hummingbird 25 Oct., (JPJ); 8 Lark Sparrows 22 Sept. (RW). Lark Sparrows are thought to be in Nashville area in summer, but sight records are rare; 1 Grasshopper Sparrow dead at WSIX tower 18 Oct. (ARL), and 1 Chipping Sparrow 6 Nov. (ARL).

Our arrival dates for wintering birds were about average, with one exception: a Brown Creeper was seen by HH 24 Sept., a date which is from two to three weeks earlier than previously reported dates for ten years. Our winter, with the coldest weather on record (15.2 below zero on 24 Jan., followed by -6, 25 Jan.) began 5 November when the mercury dipped to 29, followed by a reading of 25 on 6 November Nashville bird watchers thought this would be the winter when we might have most anything visit us, but only one rare winter visitor has been reported: 1 Pine Siskin, 3 January (CMF). Not one Evening Grosbeak was reported, whereas last winter we had three records, (2 singles and one record of 3). We have had no report of Red-breasted Nuthatches, but last year there were several. Purple Finches have been around all the winter, since our first record of 1 on 10 November, (SB). The roost on Old Hickory Blvd. which this species has used for several years in winter, is active again, but apparently not as many birds are using it as during some winters in the past few years (ARL). 33 were reported on our Christmas Count, but in recent weeks the number is believed to have increased considerably. One observer reported a possible 100 in a flock about her yard.

We cannot make any accurate estimate of damage to our Bluebird population by the severe cold suffered and the coat of ice which was on the ground over a week the middle of January. There are signs which seem to indicate depletion, but we get reports of an abundance of Bluebirds in the country, so we have to wait and see.

There has been a feeling with some of our Nashville observers that some species of land birds have been more scarce than usual: Song Sparrows, Juncos, White Throats, Myrtle Warblers. The numbers on our Christmas Count seem to indicate this but our Count was taken on a rainy, cold and windy day, so we cannot judge by that alone.

Only two spring arrival dates have been established: 5 Blue-winged Teal 9 March (HEP) and 1 Chipping Sparrow 12 March (MP). We are eagerly awaiting other arrivals.

SUE M. BALL, 1617 Harding Place, Nashville.

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COOKEVILLE AREA. — This report is more prosaic than usual. Spring has not yet (3-13) awakened the muse to do more. Weather-wise the season started here with a bang (10-24) with frost and a light freeze. The first ground-covering snow (12-6) brought the first large flocks of Starlings into town. After this real winter, as evidenced by this summary:

Third snow, 4-5 inches, Dec. 12

Dec. 11-12 nine below 0, plus 12, highest for the day.

Fourth snow, 4-5 inches, Dec. 24. (Bird count, Dec. 28, light freeze, but sunny).

Jan. 12, thirteen below 0.

Jan. 23-4, fifteen below 0.

Jan. 25, more snow, then slush and clearing.

Jan. 28, one below 0.

Feb. 12, more than 3 inches of snow.

While much bird feeding was done by the local enthusiasts, only a few observations were reported. At a football game, two club members (C. P. and C. W.) saw some 130 wild geese in two flocks headed south over the stadium, Oct. 13. The same ones heard the first White-Throat song of the season on Oct. 17. Two days later, small flocks of these sparrows were in the same area. These two birders heard notes of the Song Sparrow as late as Oct. 14—a late record for our chapter. (My first for White-Throats was Nov. 10). Mrs. C. Peterson, who is making a hobby of "bird-song shorthand," reports 7 variations of the song of local Song Sparrows.

On the morning of Dec. 12, the first, and only, Brown Thrasher fed on sunflower seed in my back yard—the first bird of this species to visit this yard in the winter. A. Ballinger reported that he heard the first calls of the Mourning Dove on Feb. 9. By Mar. 10 these birds were beginning to pair off. A few White-Throats are around although the last two days (3-10 to 13) have been very mild.

Two members (C. Peterson and M. Richmond) have investigated bird food, and prices, available at local feed stores. These data have been duplicated and given to members of the Upper Cumberland Chapter. The Tech Times, a weekly news bulletin for the Tech faculty, included this information in a recent issue. Along with this went an appeal for the humanitarians among us to take pity on the hungry birds.

Perhaps as an outgrowth of this clearly local publicity, two feature articles have appeared in the local press which circulates widely in this county. These articles were not solicited by the birders, but they seem to reflect an increasing awareness of birds and their problems.

P. L. HOLLISTER, Biol. Dept., Tenn. Tech.

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GREENEVILLE AREA. — The fall and early winter were dry; the later winter and early spring have been very cold and wet. The cold lasted longer than usual this year, beginning in January the cold with snow several times continued through February.

The general census seems to be that there was a shortage of Purple Finches, Evening Grosbeaks, Robins, and Bluebirds this winter. Purple Finches were seen toward the end of February none before (Spees, Clinard). Very few Purple Finches all season (Darnell). With the temperature down to 6 degrees on Feb. 27 Purple Finches were singing and again on Mar. 10 (Nevius). No Evening Grosbeaks were seen this winter (Spees).

Robins came toward the end of Feb. (Spees). Robins were present the first week in Mar. (Nevius). No Bluebirds since the Christmas count until Mar. 8 (Darnell). Bluebirds came the last week in Feb. and seem to be about the same in number as last year. On Mar. 10 three pairs were singing (Nevius).

During the fall and winter a covey of Bobwhites were seen regularly in a soybean field. More Grouse than usual were seen in the mountains this fall and winter (Nevius). The only Nuthatches seen were in the mountains in Jan. and again in Mar. (Spees, Nevius). One Red-headed Woodpecker has been present at the Mosheim school since last fall (Nevius). In the middle of Feb. during one of the colder times of the past winter all open water was iced over and 35 Canada Geese had to locate an open stretch of fast moving creek in order to land and reach the bank to rest. Mar. 7 twenty more Canada Geese were seen (Nevius).

One Brown Thrasher has stayed all winter and one Ruby-crowned Kinglet since the middle of Dec. (Clinard). Last winter (1961) only two White-crowned Sparrows (first time) were seen, this winter three were present all winter (Darnell). Other places the usual numbers of White-crowned and White-throated Sparrows were present (Nevius). Feb. 24 25 Mallards were seen on the puddles of a creek bottom. Feb. 25 Song Sparrows, Towhees, and Goldfinches were singing one Blue-winged Teal and one Red-tailed Hawk were seen. Mar. 12 one pair of Wood Ducks was seen on an overflow pond. Mar. 13 one Sparrow Hawk (Nevius). Field Sparrows were singing Mar. 1, Juncos were singing and Redwings were present on Mar. 8 (Darnell). The first Phoebe came Mar. 12, the first Sparrow Hawk Mar. 13, the second Phoebe Mar. 14. One large flock of Field Sparrows (100) spent the winter on the sheep pasture. One large flock of Horned Larks (75-100) spent all winter around the feed racks. Downy Woodpeckers, Red-bellied Woodpeckers, Titmice, Chicadees, Wrens (Carolina, Bewicks, Winter) and Mockingbirds have been steady visitors at the feeders (Nevius).

Last spring a Grackle with white feathers in the wings and tail stayed with other Grackles for several weeks, this spring Mar. 8 a white-winged and white-tailed Grackle appeared again and is still present Mar. 15 (Nevius).

RICHARD NEVIUS, Greeneville.

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KINGSPORT AREA. — The winter just ended was marked by prolonged cold weather. Below zero temperatures came during the second week of December and prevailed during the last two weeks of January. Record cold weather continued as late as the third week of February. During this period we recorded eighteen species of ducks, a better than usual representation, although the numbers of each were rather low. No hawks and no White-crowned Sparrows appear on our records for the winter months. The number of individuals in at least six species were noticeably low, Turkey and Black Vultures, Coot, Killdeer, Flickers, Meadowlarks, and Field Sparrows. We saw larger numbers of Ruby-crowned Kinglets and Ring-billed Gulls than have been seen for a number of years. At three scattered locations Brown Thrashers spent the winter. A Baltimore Oriole, first seen on December twelfth, survived in and near the yard of Mrs. Fred Kays.

For the record we think we should report that during the first week of October, Dieldrin was sprayed from a small plane up and down Reedy Creek Valley along the new Bristol highway, and along Holston River and the Sluice.

Also, because of possible interest to professional ornithologists, we mention a number of observations of orange-colored tumor-like growths on the eyelids of Mockingbirds and House Sparrows with resulting blindness when the eyes were eventually covered.

As spring begins we record an unusually early date, March 15, for the arrival of Purple Martins at the gourd colonies of M. C. Hargrave and Guy Isenberg.

ANN HARNEY SWITZER.

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ELIZABETHTON AREA. — Our checks on the migrant and winter water birds of Watauga Lake, Boone Lake and the upper reaches of Patrick Henry Lake below Boone Dam have not been as intense this year, but interesting observations have been recorded. Common Loon were only recorded on 28 Oct. (4), 4 Nov. (1) & 11 Nov. (3); Horned Grebe 28 Oct. (2), 11 Nov. (13), 9 Dec. (1), with the most noted on 10 Feb. (15); Pied-billed Grebe 28 Oct. (3), 4 Nov. (3), 11 Nov. (1), 9 Dec. (6), with the most being recorded on 10 Feb. (13). Our first records of Great Blue Herons begin 28 Oct. (9) with them being recorded regularly below Boone Dam around the islands in the upper area of Patrick Henry Lake. It appears we had a wintering population of 10-15 herons this past season. The last Green Heron departed 10 Dec. (CS).

A single Canada Goose flew over Roan Mt. 19 Sept. (FWB). An immature Blue Goose was first recorded on a small pond with domestic ducks in Johnson City 9 Dec. and has remained throughout the winter.

Mallards first appeared 28 Oct. (7) and remained through the season with the largest number recorded 24 Feb. (140); Black Ducks recorded first on 28 Oct. (9) with largest number of 400 counted on 10 Feb.; Gadwell reported: 4 Nov. (6), 11 Nov. (6), with maximum of 15 on 27 Jan. First Widgeon on 4 Nov. (15), with other scattered numbers through the winter; Pintail: 9 Dec. (4), 6 Feb. (3), 17 Feb. (5); Blue-winged Teal: 3 Sept. (5); Shovler: 17 & 30 Sept. (1); Wood Duck normally do not winter in our area, but a flock of 11 were noted 1 Jan. (JB), while our last autumn date was 11 Nov. (2); only one record of Redhead 3 Feb. (1); few records of Canvasback: 20 Jan. (2), 3 Feb. (4) & 24 Feb. (3); Scaup were uncommon in the fall with the first one reported 3 Nov. and very few till 20 Jan. (97) when they became more abundant for the remainder of the season with numbers of about 140 each week in Feb. Common Goldeneye were also uncommon in the fall with 1 on 30 Sept. being the first. Their largest numbers were in Feb. with 125 being the high on 24 Feb.; Bufflehead continue to winter on Wilbur Lake with the first birds showing up on 3 Nov. (2) and the highest number counted on 15 Dec. (46); A single female Oldsquaw was recorded on Boone Lake 10 Feb. & 10 Mar.; 9 Ruddy Ducks on 11 Nov. at Watauga Lake were unusual for our area; Hooded Mergansers first recorded 11 Nov. (3) with 38 on 9 Dec. and 2 to 6 usually found each weekend the remainder of the season; Common Merganser 11 Nov. (9), 3 Feb. (1) & 10 Feb. (4); Red-breasted Merganser: 11 Nov. (2), with one also on 20 & 27 Jan.

Turkey Vultures were noted occasionally except during Dec. and Jan. One Black Vulture was observed 30 Jan. Except for migration, very few hawks have been noted. An immature Bald Eagle was on Boone Lake 20 Jan. (KD). Ring-billed Gulls continue to outnumber Herring Gulls by a wide margin here.

It appears that very few northern birds spent the winter in our area. An occasional Sapsucker was noted, while the Brown Creeper was recorded only twice. Single Winter Wrens were observed in Feb. as well as a Bewick's coming to a feeder for two days. Hermit Thrush were observed 14 Sept. and 17 Feb. A few Bluebirds were noted throughout the winter. Unusual winter records of the Brown Thrasher were one each on 3 Feb. and 26 Feb. (KD). Golden- & Ruby-crowned Kinglets were extremely scarce. No Cedar Waxwings were noted since the end of Sept. Evening Grosbeaks did not show up this year, while Purple Finch were not observed from 28 Sept. to 10 Feb. Seven Pine Siskins on the Fall Count 30 Sept. and 2 on Roan Mt. at 5800 feet 11 Nov. were the only birds recorded. The Red Crossbills were not observed on Roan Mt. after 11 Nov. (FWB).

The usual sparrows were recorded during the winter except for the Swamp which has not been seen since the middle of November. Five Snow Buntings were located on Roan Mt. 11 Nov. and 2 on 10 Dec. (FWB).

Late were 2 Tree Swallows on 28 Oct. (KD).

KENNETH H. DUBKE, 918 State Line Road, Elizabethton, Tenn.

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ERRATA. — The Christmas census list published in last issue, shows 2 Golden Eagles and 1 Rough-legged Hawk credited to the Nashville list. The figures for these two species should be transferred to the adjoining column which is for Reelfoot Lake. Also, the Harris Sparrow record, credited to the Chattanooga list, should be transferred to the Columbia column.—Editor.

# ROUND TABLE NOTES

DECEMBER WOODCOCK AT KNOXVILLE. — On December 28, at 5:50 p.m., I was surprised to hear the nasal "beezp" notes of an American Woodcock. He uttered seven "beezp" notes. The following day I began listening for him shortly after sunset, but it was 5:50 before I heard him and he again uttered seven "beezp" notes. The temperature was balmy both days.

On December 30 we participated in the Smoky Mountain Christmas bird count and I was not home to check on him. But on December 31 through January 4 there was no sound from him. The temperature was rather low during that time. On January 5 the temperature rose to 43 degrees and he "beezped" twelve times. Although I checked on him every day, he was silent through the very cold weather of January 6, 7 and 8, but at 6:00 p.m. on January 9, sixteen "beezps" were heard, and the weather was warm and clear. January 10 and 11 were also warm days but I was away from home until after dark and do not know what he did on those nights. On January 12, with temperature at 43 degrees and the weather cloudy, he began "beezping" at 5:50 p.m. and continued with fifty-five "beezps." From January 13 through 18, with snow and extremely cold weather, there was no sound from him but on the 18th the temperature rose to 41 degrees and, although he did not "beezp", he gave a brief chippering, chucking sound, similar to the flight song, but did not appear to rise from the ground. Up to this time he had only "beezped." On January 19, with temperature of 43 degrees and cold rain and heavy fog, I heard three "beezps" above the pattering of rain on my raincoat, the first note starting at 5:55 p.m.. On January 20 and 21 there was snow and extremely cold temperature and he did not perform. On January 22, with temperature at 41 degrees, there was no "beezping" but he again gave a few "chucking" notes, lasting but a second or two, but as he did so it appeared that he flew quite low over the ground for about twenty-five feet.

This was the last heard from him. The following day most of the State was covered with ice, followed by snow and zero temperatures. The extremely cold weather which lasted throughout January was probably more than he could take and he either departed from the area, or perished. Since he did not "beezp" except when the temperature was above 40 degrees, and his pattern of behavior was haphazard, it seems logical to assume he was a lone male with no incentive to perform the courtship flight song. This is based on the fact that Woodcocks in the same vicinity on February 18, 1961, both "beezped" and sang the courtship flight song after a snow, when the temperature was below 30 degrees.

Temperatures stayed below 40 degrees until February 4. On February 5, although 63 degrees during the day, there was no "beezping" and I concluded it was useless to check further on this bird.

On March 2, at least five American Woodcocks were heard "beezping" and performing the aerial courtship song in the same area, but these were probably new arrivals. Weather conditions could also have influenced these, since temperatures had been below normal during the last two weeks of February. I checked the area during this time and did not hear them.

MARY ENLOE, 2705 Riverside Drive, Knoxville 14, Tennessee

# CASUALTIES AT WSIX TV TOWER IN AUTUMN, 1962

At WSIX television tower in Nashville, 243 migrating birds of 46 species were killed in 1962 from the night of 5-6 September into November. The area was searched early each morning from 6 Sept. through 11 November, although no casualties were found after 6 Nov.

For the first few days of September, temperatures were above normal, with southerly winds, but on the 5th, wind shifted to the north, mean temperature fell below normal; overcast skies and a light rain produced the type of weather for tower casualties. Mrs. Clara Fentress and I gathered 25 dead birds of 15 species 6 Sept. and found remains of a Yellow-billed Cuckoo and a dessicated small warbler that had been killed previously. On the following night, there were 10 casualties of 7 species.

A period of south and east winds or fair weather with north winds produced only a few dead birds (none to 3 per night) until the night of 25-26 Sept. North wind, light rain, fog and complete overcast resulted in 8 casualties (6 of them were thrushes of 3 species). The following night there were 6 casualties.

Another period of light kills ended in early Oct. On the 4th, northwest winds were followed by rain on 5 and 6 Oct. Although the wind had shifted to south, there must have been a heavy migration in progress, for on the night of 5-6 Oct. we had the largest kill of this season, 76 birds of 17 species. Tennessee Warblers led in numbers with 22 (29% of the night's total), Ovenbird 10 and Magnolia Warbler 7.

Only a few were found until the morning of 17 Oct. after rain and north wind: 48 birds of 12 species were killed including 14 Palm Warblers (29% of the total) and 8 Myrtle Warblers. The following night 17-18 Oct. there were 18 birds of 12 species, including 4 additional Palm Warblers, a Yellow-billed and a Black-billed Cuckoo.

The largest casualty list of November migrants occurred on the night of 3-4 Nov., 7 birds of 5 species: Brown Creeper, Winter Wren, Golden and Ruby-crowned Kinglets and Song Sparrows.

This year there were a few extreme dates for 1962 and two all-time extremes: latest departure, Black-billed Cuckoo on 18 Oct. and a Veery on 6 Sept. which tied a previous early arrival date.

Almost all of the dead birds were utilized by workers for various types of scientific studies.

The complete list of species collected at WSIX TV tower follows: Mourning Dove, Yellow-billed Cuckoo (2); Black-billed Cuckoo; Flicker; Yellow-bellied Flycatcher; Least Flycatcher; Wood Pewee; Brown Creeper; Winter Wren; Long-billed Marsh Wren; Catbird (2); Wood Thrush (5); Swainson's Thrush (6); Veery (2); Golden-crowned Kinglet (6); Ruby-crowned Kinglet; Yellow-throated Vireo; Red-eyed Vireo (13); Philadelphia Vireo; Black-and-white Warbler (5); Tennessee Warbler (37); Nashville Warbler; Magnolia Warbler (17); Myrtle Warbler (11); Black-throated Green Warbler (8); Blackburnian Warbler (5); Chestnut-sided Warbler (5); Bay-breasted Warbler (13); Palm Warbler (30); Ovenbird (23); Northern Water-thrush (5); Kentucky Warbler (3); Yellowthroat (4); Yellow-breasted Chat (3); Wilson's Warbler; Canada Warbler (2); Redstart (2); Indigo Bunting (4); Savannah Sparrow (2); Grasshopper Sparrow, Slate-colored Junco; Chipping Sparrow; Field Sparrow; White-throated Sparrow (2); Swamp Sparrow (6); Song Sparrow (2).

AMELIA R. LASKEY, 1521 Graybar Lane, Nashville.

# THE MIGRANT

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OREGON JUNCOS IN EAST TENNESSEE. — Early in 1963 Miss Marge Wilson, Ten-Mile, Tenn., wrote J. B. Owen, Knoxville, describing a junco which was visiting her feeding station. She had noticed it first on December 11, 1962. The description fitted that of an Oregon Junco. So on January 20, 1963, the Knoxville Chapter of the T. O. S. diverged from its planned field trip to visit Miss Wilson's home, which is on the eastern side of Watts Bar Lake, about ten miles south of Kingston. Only a few of the party were able to watch the feeding station from inside the house, which was unfortunate because the others were too distant to get a good look at the bird. It came to the feed on the ground with a small flock of Slate-colored Juncos, but it did not stay closely with them and several times was chased away from the feed. From about fifteen feet away, we were able to see the distinct demarcation between the gray hood and the tan sides, confirming that it was an Oregon Junco, *Junco oreganus*. Those who saw it, besides myself, were J. B. Owen, Julia Moore, Mr. and Mrs. James Campbell, Mr. and Mrs. Merritt C. Farrar.

The following day Mrs. James Campbell observed another Oregon Junco in her yard in northern Knoxville; her identification was later confirmed by Mr. and Mrs. Farrar. This bird was more strongly colored than the one observed at Watts Bar Lake. A few days later Miss Mary Enloe found an Oregon Junco coming to her feeding station; it was still present on January 27.

Oregon Juncos were reported near Greeneville, Tennessee, in March of 1960 (MIGRANT, **31**: 10. 1960). I know of no other records for Tennessee.

JAMES T. TANNER, University of Tennessee, Knoxville, Tenn.

EVENING GROSBEAKS IN HOUSTON COUNTY.—A flock of Evening Grosbeaks arrived at our home in Stewart (near Waverly) in late autumn of 1961. They fed on seeds of box elder trees. In February, 1962, there were about 75 in the flock; on Mar. 28, there were about 50 which dwindled to 30 by Apr. 5. Our last record, 3 females, was made Apr. 10.

J. D. Lewis, County Agent for Houston County, reported 20 at his home in Erin about mid-April.

MRS. B. N. STOKER, Rt. 1, Stewart.

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# THE MIGRANT

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DEVOTED TO TENNESSEE BIRDS

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# THE MIGRANT

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VOL. 34 JUNE 1963 NO. 2

## FIRST NESTING RECORD OF BOBOLINK IN TENNESSEE

### By KENNETH H. DUBKE

On 10 June 1962, the author recorded the first known nesting record of the Bobolink (*Dolichonyx orivorus*), at approximately 2800 feet elevation in Shady Valley, Johnson County, Tennessee. This article will be an attempt to summarize and give some background to this new nesting species.

According to the AOU checklist, 5th edition, 1957, the southern breeding limits of the Bobolink for our eastern area is from ". . . northern Missouri, central Illinois (Peoria, Urbana), south-central Indiana (Worthington, Columbus), southwestern and central eastern Ohio (Hillsboro, Scio), northern West Virginia (south in the mountains to Greenbrier County), western Maryland (Red House), Pennsylvania, and central New Jersey;".

Summer records of our East Tennessee area consist of one male observed on 24 June 1953, near the Franklin Club in Elizabethton, by Lee R. Herndon. Also, on 28 June 1961, the writer, accompanied by Ralph T. Bullard Jr. identified one male in Shady Valley. And during the preliminary field work for the 1961 Foray, the author and Albert F. Ganier located a pair on 16 June near the 1962 nest site. For this pair, the area was searched diligently the next two days by many parties, but no nest or evidence of young being fed out of the nest was noted. A follow up on these birds the following weekend failed to find them. Arthur Stupka in his book NOTES ON THE BIRDS OF GREAT SMOKY MOUNTAINS NATIONAL PARK mentioned the finding of a lone male on 21-22 June 1950 "in a hayfield along Deep Creek, approximately one-fourth mile south of the park boundary."

The first records of 1962 begin on 2 June when the writer identified a male singing in the meadow across from the Jess Jenkins' store. On 9 June two males were observed in the area, and it should also be noted no female was yet observed. On 10 June the author returned to the locale to patiently sit and watch for nesting evidence. After a period of a couple of hours both a male and a female were observed carrying food, at fifteen minute intervals, to a specific place. The area was searched and soon a typical nest was located with three young birds and one unhatched egg. H. W. Nunley, Bluff City, accompanied the writer on 16 June and assisted in banding the nestlings. At this time, much to our surprise, we found the two males and only one female in the immediate vicinity. Whether both males were feeding the young could not be determined, but they certainly didn't exhibit any hostility to one another. On a follow up 17 June the three nestlings had left the nest and were being fed in the grass by the parents. It was also noted on this date the two males and one female scolding us, but again showing no hostility to one another. The weekend of 23 June produced

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only one male.

This year an intense follow up on the species was pursued by the author to determine, among other things, their survival and reproduction and also to add other basic knowledge on our small breeding population. Search of the known nesting area was commenced on 21 April and continued each weekend through 16 June, with the exception of 27 April and 5 May. The first Bobolink observed in the valley this year was a small mixed migrating flock of about twenty-five birds in a grassy field on the date of 19 May. Regular and diligent search of the 1961-62 areas did not pay off till 5:55 AM, 26 May when one male was observed singing in his selected territory. At about 6:30 AM, the same day, another male joined the one under observation and appeared to feed with it about a minute before flying off in the distance. According to notes taken at the time, the territorial male then chased off his returning rival twice in the next hour and thirty-five minutes. In fact, the male on territory flew up and appeared to challenge and drive off his rival both times before the author was aware there was company in the area. During this same period of time a female appeared twice in the territory and was vigorously pursued by the male. This was the only time a female was observed during the breeding season. At 8:45 AM the rival male appeared again, only to be again challenged and repelled from the territory. After this encounter, the territorial male spent most of his time feeding in the grass and performing flight songs till the author left the area at 9:05 AM.

Charlie Smith, Milligan College, accompanied the author on 2 June and on our arrival at 5:25 AM the single male was observed on his territory feeding and regularly performing his flight song. While Charlie watched the single male, the author for the next two hours searched diligently and widely in the surrounding appropriate habitat for other nesting Bobolink, but none were found.

On 9 June there was a heavy fog in the valley when the author arrived at 5:30 AM. Two minutes later the singing male arrived through the thick pea soup fog. Upon landing he commenced feeding in his favorite grass clumps but after three minutes he departed. He returned singing through the fog six minutes later but stayed for only five minutes before departing again for seventeen minutes. The next time he arrived he stayed twenty-one minutes but only performed three or four flight songs and departed when two other similar sized birds flew over his territory. The light conditions were still bad at this time and identification was not possible to name these other birds. At 6:42 AM he returned singing to his favorite clump of grass and stayed for only twelve minutes. During this stay he performed only three flight songs. This action of leaving and returning to the territory for extended periods of time continued till the author left at 8:30 AM. It should also be noted the sky had cleared considerably by 7:50 AM when it was observed two additional males appeared overhead singing and our territorial bird flew up and joined then in departing in the distance. No hostility was noted among the three.

A follow up on the lone territorial male was made 16 June when the author arrived at 5:15 AM and stayed through a light rain and fog for a hour and a half. Our lone male was not present, nor were other Bobolink found after searching the area.

Of especial area interest are also the personal records of Wendell P. Smith, North Wilkesboro, N. C. To quote from a letter dated 16 November

1962: ". . . On May 21, 1959, I saw a male and female Bobolink (pair) in the field by the airport. On June 3 of the same year, I saw a female with two young. I feel sure that this pair nested. On May 25, 1960, I saw five Bobolink in the plumage of the female in the same field. As I did not see them again, I think it probable that they were migrants although it was two weeks later than I have seen migrants. On June 5, 1958 I saw one male at Deep Gap, N. C. That is the extent of my summer records." In a recent letter dated 15 June 1963 Mr. Smith stated that he had no more nesting Bobolink this year and knew of no other people with North Carolina records of their nesting.

Sprunt and Chamberland in their book SOUTH CAROLINA BIRD LIFE mention that straggler Bobolink in South Carolina have been noted in June with the latest record 23 June.

This writer knows of no nesting records of the Bobolink in Virginia, but with our present knowledge they should be expected to breed there.

## SUMMARY

In the foregoing paper we have attempted to summarize various records and observations of what is known of the Bobolink in the area. There have been scattered June records with a good possibility of the birds breeding in Shady Valley in 1961 when a pair was noted on the late date of 16 June. In 1962 a definite nest with young was located. The year 1963 produced a total of three males and one female during the breeding season, but it is not known if there was any mating or production of young. The habitat for nesting Bobolink is too extensive in Shady Valley for any one person to check thoroughly during the short nesting season. The male under observation this year offered a good example of the defended territory and pointed out the fact there could have been other birds mated in the valley but overlooked. With what is now known it will be interesting to see the results of extensive field work in 1964.

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918 State Line Road, Elizabethton, Tennessee.

# FIRST BREEDING RECORD OF VIRGINIA RAIL IN TENNESSEE

### By MRS. E. M. WEST

On Sunday, 5 May, 1963, E. M. West found a nest containing 6 eggs in a marsh beside Amnicola Hwy. about 1 mile from the city limits of Chattanooga. He was leader of a field party attending the Annual Meeting, and several of the group saw the nest which appeared to have been abandoned. No one positively identified the nest, and it was assumed by some that it belonged to a King Rail which was flushed nearby. At least one of the eggs was damaged and all were cold. It was felt that the nest had been abandoned as a result of rising water level caused by a rainfall totaling 4.27 inches between 28 and 30 April, inclusive. The site was marked so it could be found again.

Returning to the spot on 7 May, the status of the nest had not changed and once again a King Rail was flushed nearby. However, another nest was found containing much larger eggs.

That night Albert Ganier telephoned to ask that an egg be collected, or that the nest and eggs be collected if abandoned, and sent to him for identification. Henry Parmer of Nashville, who was with the field party of 5 May, had alerted Mr. Ganier to the possibility of its being a Virginia Rail nest. Mr. Parmer's curiosity was aroused when he saw the nest. Although he did not know offhand just what it was, he had some familiarity with what it might be. Upon his return to Nashville, he visited the several collections there and came to the conclusion that the Chattanooga nest must be that of a Virginia Rail, unlikely as that might be.

The nest and eggs were collected on 11 May. Also, an egg was taken from the nest nearby, suspected of being a King Rail's. All were sent to Mr. Ganier who identified the nest and eggs as belonging to a Virginia Rail, and the single, larger egg as that of a King Rail. For verification of his identification, Mr. Ganier mailed the set of eggs to the U. S. National Museum in Washington, D. C. A reply, dated 18 June (ref. No. 248321) from Alexander Wetmore, Research Associate, indicated that he had no hesitance in marking them as Virginia Rail eggs.

Efforts were made by a group of local chapter members on both 7 and 14 May to locate a second nest and to flush the adult birds. Members formed a line and systematically inspected each clump in a large portion of the marsh. Although this did not meet with success, many other nests were found, including the King Rail's already mentioned, a Least Bittern's nest, and many of Red-winged Blackbirds. The Wests have returned on other May week ends for the same purpose, without success.

Search of **The Migrant** between mid 1950 and mid 1961 shows reference to 28 Virginia Rails (counting 1 for each reference when exact number was not given). Of these 28 birds, 11 were found dead and 17 were seen alive. Five were seen in April and five (incl. 3 dead) in May. None of the observers commented on the possibility of a nest or expressed the intention to look for one. Apparently, all were aware that the Virginia Rail was not supposed to nest in Tennessee and that such a search would probably be a waste of time.

It now appears it is no longer safe to assume that a spring or early summer bird is a migrant. To return to the skimpy data available on the 28 birds, the earliest spring record is 2 on 22 April in Knox County.

Assuming it was abandoned no later than 30 April (last day of 4.27" rain), simple calculations on the Chattanooga nest indicate the first egg was probably laid not later than 25 April and may have been laid several days earlier. This breeding pair may, therefore, have reached the marsh in the first half of April. It follows that we should start searching for this species soon after 1 April, and should continue to look for nests through May.

T. A. Imhof reports in **The Migrant** of September 1949 that at least 2 wintered at Bayview Lake, Birmingham, Alabama, in 1948-49, being seen at intervals until 5 June. The proximity of Birmingham makes it likely that Tennessee would have early spring arrivals. The Birmingham dates even raise the question of whether the Virginia Rail may have nested there.

There is an Alabama breeding record that slightly reduces the importance of the Chattanooga record since the former occurred at a more southerly location. It was in June 1945 that a brood of young were seen trailing an adult Virginia Rail at Wheeler Refuge, Decatur. This rare observation was made by L. S. Givens, now with the U. S. Fish & Wildlife Service in Atlanta.

For local convenience, the marsh has been named for the Amnicola Hwy. which borders it. It is situated on a private farm and comprises about half of a large field contained by a fence. Acreage is estimated to be 8 to 10. Cattle are watered there, but ordinarily use the edge nearest the barn. The nests of both the Virginia and King Rails were placed at the opposite end of the marsh in clumps of Common Rush *(Juncus effusus)*, the dominant plant.

The Virginia Rail is described as a small bird about the size of the Sora Rail, but with the general pattern of the King Rail. However, it is much too small to be confused with the King Rail and has a long, slender bill that readily distinguishes it from the Sora.

According to Forbush in "Birds of Massachusetts and Other New England States," it builds a nest of weeds, grasses, dead stalks, etc. in a tussock or on a pile of broken down reeds or driftwood. It lays 5 to 12 eggs, colored somewhat like those of the King Rail but near the size of the Sora's eggs. When flushed, it is quite likely to escape by running through the cover rather than flying weakly over it. Possibly, its reluctance to fly and show itself is the reason we have not found the owner of the Chattanooga nest.

At least one other Virginia Rail was in our neighborhood this spring. On 3 May, Benton Basham found a dead one at the base of the rear wall of Jubilee City, a large one-story department store in the Brainerd section. Less than 100 feet from the spot is a small cattail marsh that contained a nesting King Rail at that time.

The only live Virginia Rail reported in this area was also found by Mr. Basham on 30 April, 1961, spring census day. This small marsh on Shallowford Road has since been bulldozed out of existence.

5511 Dayton Blvd., Chattanooga 15, Tennessee.

## TWO DAYS AT REELFOOT LAKE

By JOHN O. ELLIS

As Cranetown goes, so goes a very large portion of the spine-tingling enjoyment of that by-product of one of Nature's rebellious moods in 1811-1812, Reelfoot Lake. This is true for us members of the T.O.S., at least.

"We certainly do want to spend some time at Cranetown. We also want to find this Osprey's nest in the Upper Blue Basin," pointing to the spot on a map of the Lake furnished us by our friend and counselor, Mr. Albert Ganier, we said to Buddy Hoffman, our young native guide. This nest, incidentally, proved to be at the exact spot the typically prepared Ganier map indicated.

"You can't get to Cranetown and the Cranes are not there anymore anyway. About this Osprey's nest, it is a day's trip to Walnut Log and the Upper Blue Basin but we will make it," he replied.

We had to see for ourselves why the place Cranetown, long-time nesting site for Egrets, Herons, Cormorants and Water-Turkeys (Cranes to the natives) was suddenly off-limits and out of business. The weather was changeable for 15-16 May, 1963. 15 May was rainy and bitter cold all day, with the temperature in the 40's to the 50's, the wind at five to ten miles. 16 May was marked with full sun and temperature reaching the high 60's. The general condition of the Lake was unfavorable to the outboard motor. The moss or algae was blocking our path at every turn. The date for uninterrupted boat travel was past. A boat pushed with a pole at the rear is to be preferred at this time of year by Birders. While passing through the Samburg ditch, a Least Bittern, 1; Coot, 5; Florida Gallinule, 3; Lesser Scaup, 1; numerous Red-wing Blackbirds were observed along the bank, while overhead were Least Tern, Wood Duck and Common Egret. The Osprey nest in Forked Pond which, according to the statement of a member of Game and Fish Commission at Samburg, had been used for thirty to forty years was abandoned. The gossip had it that the eggs had been taken on two successive nestings and a young bird thrown from the nest by a careless passerby (a young boy who was not necessarily in sympathy with Ornithological studies) on another occasion.

Wood Duck appeared to be nesting in this area but no nests observed.

A similar experience was ours on visiting a Bald Eagle nest in the Grassy Bend area. It was obviously an old nest from the standpoint of usage, but a forty-minute stay, using a 30 power telescope and binoculars, revealed no activity. A visit to another known nesting area for the Bald Eagle in Starve Pond produced nests but no activity. (Editor's Note: At this date young eagles would have left the nest.) Crows were observed giving chase to a Barred Owl. No eagles seen. The only Bald Eagle observed was an adult bird as we re-entered the Forked Pond area. It was observed at a distance of fifty to sixty yards and flew several times.

Sure enough, the remains of a bridge, used by loggers, lay across the mouth of the Big Ronaldson Ditch and was like a sign "out of business" as far as Cranetown was concerned. It seems, or at least rumor had it so, that a movie was made in and around Cranetown and for some unconfirmed reason dynamite had been exploded. This may or may not be a fact and if so, may or may not account for the absence of water birds in the general area.

On the trip to the north end of the Lake, one (1) immature Green Heron, one hundred (100) plus American or Common Egrets, twenty-five (25) plus Great Blue Heron, Wood Duck, and Prothonotary Warblers were singing from every live cypress. Also found were a female Wood Duck with sixteen ducklings which were caught in the moss and struggled to get away, one (1) Mallard drake, numerous Least Tern and only one (1) Water-Turkey.

The Osprey nest was located on top of a limbless and lone cypress stump at approximately thirty to thirty-five feet in the air. It was active. No feeding was observed. Both male and female birds were observed for an hour at a range of approximately thirty yards. A stop-off at Grassy Island on the way back to Samburg boat dock produced a pair of nesting Summer Tanagers, Yellow-breasted Chat, Blackpoll Warblers, Ruby-throated Hummingbirds, Indigo Buntings, Wood Thrush, White-eyed Vireos, Cardinals, Grackles, Cowbirds, Wood Peewee, Phoebes, Crested Flycatchers, Red-bellied Woodpeckers, Downy and Hairy Woodpeckers, Tree Swallows, Barn Swallows, and Blue-Gray Gnatcatchers.

The area around the Game and Fish Commission headquarters at the south end of the lake was teeming with birds. Among those observed was a pair of Redheaded Woodpeckers which were feeding young and in a constant battle with Starlings. The Starling and the Woodpecker would flutter all the way to the ground from the top of the sycamore locked in battle. This was observed for thirty minutes. A Pewee was nesting at an approximate height of thirty-five feet in a large cypress on a big limb about fifteen feet from the trunk. A pair of Baltimore Orioles was nesting in a large oak at a height of approximately seventy-five or eighty feet. Warbling Vireos were observed and heard singing all over the place. An unusual nesting site for a Prothonotary Warbler was a tin can under the eave of the little utility house. This do-it-yourself nesting box was made for the Wrens. The bird was feeding young and could be observed at a distance of ten feet. Orchard Orioles were heard and seen all around Samburg.

Spotted Sandpiper played around the boat dock at all hours. All in all it was a refreshing two days in the true wilds, and we hope to see the T.O.S. members here next year at the convention.

4004 Overbrook Dr., Nashville 5, Tennessee.

# JOE (OR JOSEPHINE), THE CROW

By LYNN R. SPEES

The source of some of my small problems, but the most enjoyed of all the many pets my family has had is Joe the Crow. About four years ago he was found by two crow hunters on the ground where he had fallen from the nest. One of them kept the young crow, but later gave it to my family when it became too great a burden for him.

During his early life Joe's ravenous appetite was satisfied by Purina Dog Chow, pre-moistened and fed by hand. Water, of course, was given, along with fruit, berries, insects, some meat, and a little gravel. When I stopped feeding him by hand, I was amazed to see the crow dip the chow in the water himself, as he still does. Another part of the little care he needs is a shelter in the cage, covered on the top and one side, where he stays in bad weather and at night. For my own peace of mind, I kept him in the basement on a few of the coldest winter nights.

Joe's physical characteristics need little description. His wingspread is over two feet, and he is about seventeen inches long. This latter measurement gives the hint that "he" may be Josephine, for, compared to other crows, "he" is somewhat small.

One of his most enjoyable characteristics is his apparent intelligence. Joe either understands things, or pretends to, or at least tries to find out about them. One of his most momentous achievements was to come into the house of his own accord. Being very wary, he is always cautious about closed places, but after he gained enough courage to come in, Joe tried to take over by hopping onto the kitchen table, which promptly curtailed future admittances. Another indication of a large brain are his quick reflexes, having never been stepped on even while running between people's legs to steal a badminton birdie. Likewise, it is difficult for me to catch him and almost impossible for a stranger.

Joe is a neighborhood pet. He often "calls on" the neighbors and receives a biscuit or other food morsel. One time he went beyond his usual limits by following our car to the site, a mile distant, where we are building a house. When we returned, he returned. Usually if he isn't near, he can be brought in by a few loud calls of his name, "Joe!" However, people are not always on the noisy end. Joe has learned the words, "hello," "Karl," and "HI!" He always seems to say "HI" at the right time, incidentally. Countless are his other noises, ranging from crow-like to sheep-like sounds.

His antics are usually funny and sometimes irritating. They include: the unorthodox act of lying on his back and playing with his toys; stealing keys, knives, papers, etc.; hiding various articles; removing clothes from the clothesline; and his recent bath in a spilled Coca-Cola.

Joe is both antagonist and antagonized. I think that a crow dislikes, or is disliked by, all other animals. He delights in annoying our dog and pet snakes by cautiously pecking them when he has an advantage. On the other hand, all other birds hate Joe, and it is demonstrated especially by Blue Jays, for they constantly dive at him when he is away from people and the house.

Along this same line are his reactions toward people. They are usually amusing but sometimes are tear-producing. First is his habit of diving at certain strangers, sometimes resulting in slight lacerations to the scalp of the unsuspecting victim. Another antic is his pecking of some people's socks, especially red ones. Nevertheless, it is possible for him to be agreeable. Often he will let people pet him. This seems to hypnotize him for a short while but this docility can be deceiving except for his "intimate" friends. For after strangers or not-so-close friends stop stroking him, he turns and pecks their hand.

My family and I highly recommend a crow as a fascinating pet.

1230 Robin Hood Road, Greeneville, Tenn.

## T. O. S. ANNUAL MEETING, 1963

The annual meeting of the Tennessee Ornithological Society was held on May 4, 5 and 6 in Chattanooga and vicinity, with the Chattanooga Chapter as hosts. Rolyat Motel in the Brainerd community served as headquarters. Members began arriving there and at nearby motels early Friday afternoon.

An informal reception at the Brainerd Community Center that evening provided opportunity for registering, renewing of old friendships, and meeting new members of the various chapters. Mr. and Mrs. Eugene M. West showed and narrated a color film of their recent trip to Big Bend National Park.

Saturday morning field trips in Chickamauga National Military Park were led by Mr. Rock L. Comstock Jr. and Mr. Ralph Bullard of the Park Service, Dr. Wilbur Butts and Mr. Stanley Barr. Weather was clear and cool, and many bird species were observed. Seeing the historic battleground with its monuments, markers and beautiful trees was a new experience for many. Bluebirds nesting in cannon barrels were an unusual sight.

In the afternoon, officers and directors met in Park Headquarters library while others had a choice of birding in the Park, a tour of Chickamauga Battlefield, or sight-seeing on Lookout Mountain.

The annual banquet, at 6:30 P.M. in Stagmaier Gymnasium, Our Lady of Perpetual Help Catholic Church, was attended by eighty seven members and visitors. After the banquet Mr. Edward M. King, President, presided while business of the Society was conducted.

The following recommendations of the Board of Directors were presented to and approved by the Membership:

1. That the present Committee on Birds on Protected List be continued another year.
2. That the present and past editors of **The Migrant** be given Life Memberships.
3. That uniform membership cards be made available to the chapters, the cost to be borne by the Society.

Officers elected for the year 1963-1964 were:

| | |
|---|---|
| President | Mrs. William F. Bell |
| Vice-President for East Tennessee | Mr. Eugene M. West |
| Vice-President for Middle Tennessee | Mr. Lawrence O. Trabue |
| Vice-President for West Tennessee | Mrs. Rose Newton Wooldridge |
| Secretary | Miss Marguerite McKinney |
| Treasurer | Mr. Henry E. Parmer |
| Curator | Mr. Albert F. Ganier |
| Editor | Dr. Lee R. Herndon |

Directors-at-Large, East Tennessee—Mr. John Elson, Knoxville; Middle Tennessee—Mrs. James Haile, Cookeville; West Tennessee—Mr. L. D. Thompson, Paris.

Speaker for the evening was Mr. Thomas A. Imhof, of Birmingham. He was introduced by Mr. E. O. Grundset, vice-president of the Chattanooga Chapter. Mr. Imhof, author of the book, **Alabama Birds**, published for the Alabama Department of Conservation, Game and Fish Division, traced the preparation of the book. He told of interesting ornithological phases encountered during the period.

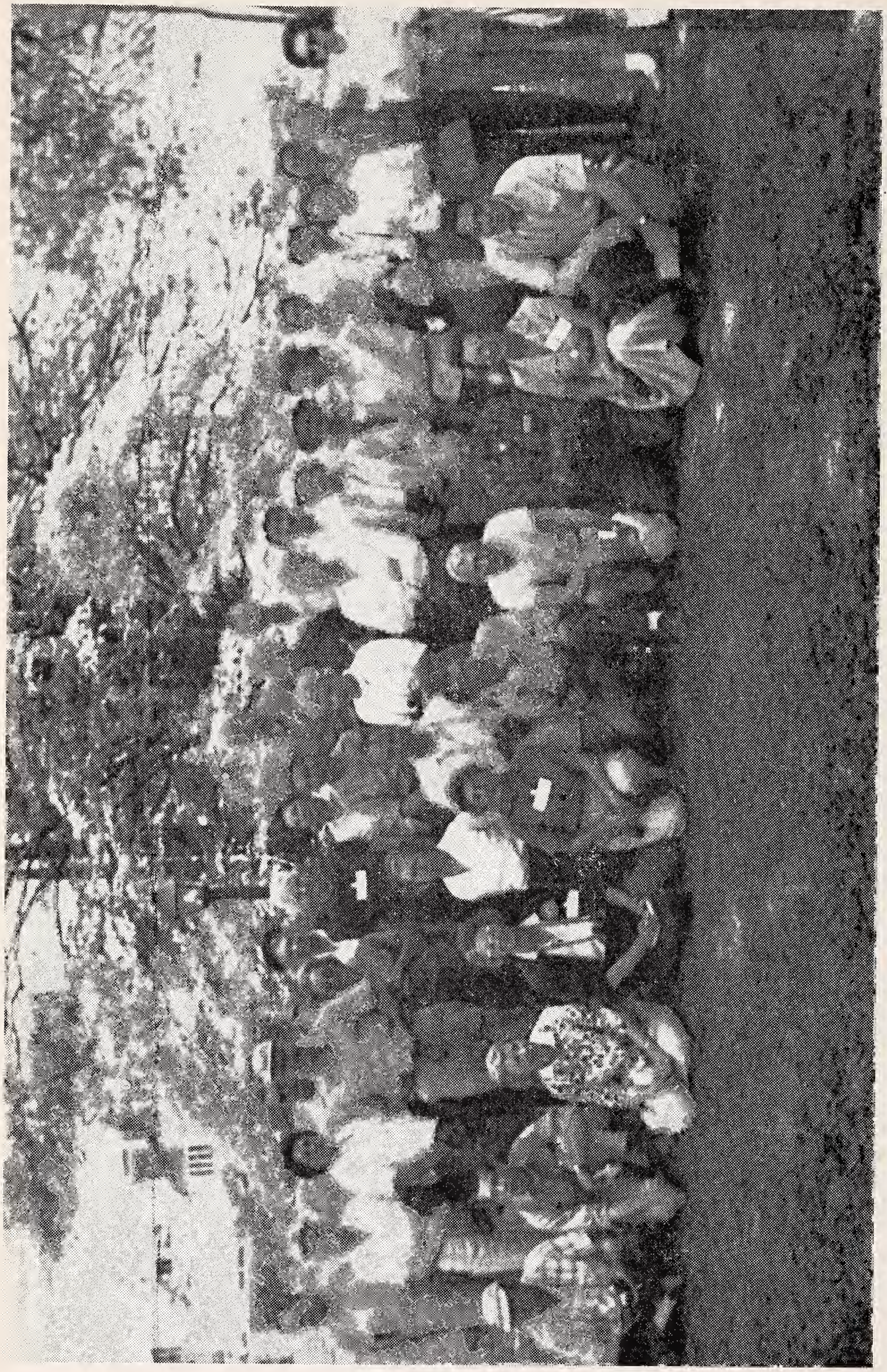
Activities Sunday morning included a mist netting demonstration at Mr. Bullard's netting site in St. Elmo with a hike around a nearby lake in mid-morning; visits to Chickamauga Dam and beautiful Elise Chapin Wildlife Sanctuary, and a hike at Amnicola Highway marsh.

Members met at the tree-shaded Rolyat patio at 11:30 A.M. for the tally, with Mr. Parmer as compiler. One hundred and thirty four species were listed for the three days of the meeting. A Red-cockaded Woodpecker was seen in Chickamauga Park, also a Bachman's Sparrow.

The Society adopted the following Resolution:

"Whereas, the Tennessee Ornithological Society, assembled at its Annual Meeting, May 4, 5 and 6, 1963, at Chattanooga, and

Resolved, that the Society express its sincere appreciation to the entire Chattanooga Chapter of TOS, and especially to the following committee



Some of the members who attended the annual T.O.S. meeting at Chattanooga, 4-6 May 1963. Photo by Wm. A. Puryear.

chairmen and their committees for the efficient planning of the entire meeting: Mrs. Adele West, General Chairman; Mrs. Carroll Barr, Hospitality; Mrs. Virginia Thompson, Decorations; Miss Roberta Doub, Identification and Maps; Mrs. Veta Sliger, Registration; Mr. Stanley Barr, Dr. Wilbur Butts, Mr. Ralph Bullard and Mr. Rock Comstock, Field Trips; and

Resolved, that those attending the Friday evening reception especially enjoyed and thank Adele and Eugene West for their film presentation and narration of their trip to Big Bend National Park, and

Resolved, that the Society express its thanks to the Chickamauga National Military Park for their invaluable contribution to the success of this meeting, and

Resolved, that the Society express appreciation to Dr. Lee R. Herndon and Mr. Eugene M. Ruhr, Editors of **The Migrant** and **Newsletter**, respectively, and to Mr. Henry E. Parmer, Treasurer, for their efforts in behalf of the Society."

Mrs. Henry E. Schiller, as president of the Memphis Chapter, invited the TOS to West Tennessee for the 1964 meeting.

MRS. J. H. McWHORTER, Secretary, 817 Goodwyn, Memphis 11,
Tennessee

# THE 1963 SPRING FIELD DAYS

### By T.O.S. MEMBERS

Counts were submitted from a total of ten areas this year. In reading some of the details under the Chapter headings it will be noted that some groups were altering their 24 hour count periods from the traditional midnight to midnight to other more desirable hours in order to attain maximum coverage of their areas. For instance, the small group at Columbia commenced at noon one day and finished at noon the following day. They located 124 species in their area.

A total of 199 species were recorded this year. This number has only been exceeded by the 1961 Count when 210 species were identified across the State. The earliest Count was held at Cookeville on 20 April while the latest was conducted at Kingsport on 11 May.

As usual, the tabulations run progressively from east to west and the number of individual birds recorded are given in figures at the end of the list.

REELFOOT LAKE. — May 4 (112 species) and 5; total 122. Some species were so common that no attempt was made to count them, but were assigned to these categories: FC, Fairly common; C, Common. One party: Mrs. Frank T. Markham (Tiptonville), Mrs. John S. Lamb and Mike Underwood (Dyersburg), May 4; Mitch Ganier (Dyersburg) and Earl Fuller (Memphis), 5 May; Mr. and Mrs. Ben B. Coffey, Jr., compilers.

COLUMBIA—The area in the vicinity of Columbia was covered in the period from noon 1 May to noon 2 May. These hours were chosen to coincide with the work schedules of the various observers. The weather was clear and cool with the temperature ranging from 40 to 70 degrees. Ten observers participated; George R. Mayfield, Jr., compiler.

COOKEVILLE — The Spring Bird Count by the Upper Cumberland Chapter of the TOS was held 20 April 1963. Area covered as in previous counts. Hours: 5:30 AM to 5:00 PM, with little observations during mid-day hours. Weather: fair; Temperature: 55 to 82 degrees; Wind: light and variable. Observers: Dr. and Mrs. J. O. Cummins, Roy Hines, P. L. Hollister (compiler), Dr. and Mrs. E. B. Knight, Dr. and Mrs. S. L. McGee, Dr. and Mrs. J. T. Moore, Mrs. Connie Peterson, Miser Richmond, Miss Marie White, Mrs. Milo Williams, Miss Chrissa Wendt.

NASHVILLE—The day of our Spring Field Day was not a propitious one, because of weather conditions.

Thirty workers in twelve teams, were out from early dawn, but the day was cloudy and cool, so that wraps were a necessity. A drizzling rain began to fall about eleven o'clock, so some groups were forced to do their afternoon work from their cars, while some of the hardier ones continued all day on foot.

One hundred and thirty species were recorded, and this was neither the highest nor the lowest number for the Spring Count in the last ten years. In 1961, one hundred fifty-nine species were found, in 1955 only one hundred and twelve; the average over the ten-year period being one hundred and twenty-two.

The LeConte's Sparrow was seen by Ganier and Groce with binoculars at 25 feet, feeding with Savannah Sparrows in the Cumberland River Bottoms in the Cheatham Dam area. We have had several records of the LeConte's Sparrow in the Nashville area previously, but this is the first known to this reporter since December 1957. Sue Bell, compiler.

CHATTANOOGA—Although the tally stood at 125 species as the annual meeting came to an end, several local members continued working throughout the rest of the day, producing 9 additional species. Mrs. Hugh Crownover found 2 Greater Yellowlegs. Rock L. Comstock, Jr. saw a Connecticut Warbler in Chickamauga Park.

Chapter members working in the Collegedale area added 1 each of the Broad-winged Hawk, Black-billed Cuckoo, Gray-cheeked Thrush, and Nashville Warbler.

Benton Basham went to the Amnicola marsh that was visited Sunday morning by a field party who were not dressed to wade in water up to 3 feet deep. His efforts resulted in 1 King Rail and 1 Sora Rail to be added to those already listed, and additions to the weekend list; namely, 1 Purple Gallinule, 2 Least Bitterns, and 1 Wilson's Phalarope.

Tuesday, 7 May, 8 chapter members returned to the marsh at 6 p. m. and were able to find the King Rail, Sora Rails, Least Bitterns, and the Wilson's Phalarope. A mystery bird seen by Basham on Sunday was again flushed on Tuesday. It appeared to be either a coot or a Common Gallinule.

These observations, unreported at the closing of the annual meeting, bring the weekend total to 134.

The Purple Gallinule is an addition to the Chattanooga area list.

MRS. E. M. WEST, 5511 Dayton Blvd., Chattanooga 15, Tenn.

KNOXVILLE—Sunday, 28 April. As for the past several years, the count area included all of Knox County with 31 observers in 14 parties covering selected areas. An all-day rain accounted for no Vultures and almost no hawks being seen. Several days of cool weather apparently delayed late April arrivals since no Blackpoll Warblers were reported and only one Canada and one Magnolia. The 135 species is the smallest total list since 1957 and compares with 147 last year. The 38 Bluebirds were two more than a year ago. The Common Loon was found by David Highbaugh and George Wood, and the Sora Rail by Mr. and Mrs. J. T. Mengel. J. B. Owen, compiler.

GREENEVILLE—Usual area about Greeneville, Tusculum, Nolichuckey River, Camp Creek Bald, Roaring Fork and Bluff Mountain. 28 Apr. 1963; 5:30 a. m. to 6:30 p. m. Cloudy with rain and a mild temperature. 18 observers. Mr. and Mrs. Clemens observed the Red Phalaropes; Mr. and Mrs. Darnell the Terns and Gull; Mrs. Nevius identified the Florida Gallinule. Richard Nevius, compiler.

KINGSPORT—The Spring Count was held 11 May 1963, two weeks later than many of the counts made by other chapters. The late date accounts for the absence of wintering species and some early migrants. The scarcity of Killdeer is a condition continuing from last fall and winter. Bluebirds also continue to be scarce. The Bachman's Sparrows appeared first on 19 April near the property of Arthur and Elizabeth Smith in open rocky, pasture land with low bushes, brambles, and young trees. Bachman's Sparrows have been heard and observed in this area every April since 1958. The weekend after our count Tom Finucane heard them singing. The Smith's believe the birds are nesting.

Members taking part in the Count were: Dan and Thomas Finucane; W. E. Gift; W. B. Hincke; Mrs. W. C. McHorris; George Rodgers; Mrs. Winston Smith and Mrs. Robert M. Switzer, (compiler).

ELIZABETHTON—A total of seven parties participated in the Spring Count held from 6:00 PM 27 April to 6:00 PM 28 April. A total of 117 species were recorded with the most unusual being the 27 Willet on Watauga Lake. The Willet, King and Sora Rail were observed by Ken Dubke. The weather was partly cloudy with the temperature between 49 and 64 degrees and slight, intermittent rain (.04 inches), especially in the mountains.

Those participating included the following: Ed Davidson, Mrs. Betty King, Mr. and Mrs. J. C. Browning, Roby May, Charlie Smith, Fred Behrend, and Kenneth Dubke, compiler.

## TABULAR RECORD OF SPRING FIELD DAYS

| | Reelfoot Lake 5-4 & 5 | Columbia 5-1 & 2 | Cookeville 4-20 | Nashville 4-26 & 27 | Chattanooga 5-3, 4 & 5 | Knoxville 4-28 | Greeneville 4-28 | Kingsport 5-11 | Bristol 5-5 | Elizabethton 4-27 & 28 |
|---|---|---|---|---|---|---|---|---|---|---|
| Common Loon | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ... |
| Pied-billed Grebe | 1 | 1 | ...... | 4 | 1 | ...... | ...... | 1 | ...... | |
| Great Blue Heron | 4 | 2 | ...... | 2 | ...... | 3 | 1 | 1 | ...... | ... |
| Common Egret | 48 | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ... |
| Green Heron | 2 | 6 | ...... | 11 | 2 | 11 | 3 | 3 | ...... | |
| Bl.-cr. Night Heron | ...... | ...... | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ... |
| Yel.-cr. Night Heron | ...... | 1 | ...... | 5 | ...... | 2 | 2 | ...... | ...... | ... |
| Least Bittern | ...... | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... | ... |
| American Bittern | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ... |
| Canada Goose | ...... | ...... | ...... | ...... | ...... | ...... | 8 | ...... | ...... | ... |
| Mallard | ...... | ...... | ...... | 4 | 1 | 4 | ...... | ...... | 6 | |
| Black Duck | ...... | ...... | ...... | ...... | ...... | ...... | 3 | ...... | ...... | ... |
| Bluewinged Teal | 25 | 11 | ...... | 39 | 3 | 4 | ...... | ...... | ...... | |
| American Widgeon | 5 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ... |
| Shoveler | 2 | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ... |
| Wood Duck | 8 | 16 | ...... | 17 | 2 | 2 | 2 | 10 | ...... | |
| Redhead | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ... |
| Ring-necked Duck | 2 | ...... | ...... | ...... | 21 | ...... | ...... | ...... | ...... | ... |
| Lesser Scaup | 2 | ...... | 5 | 3 | ...... | 1 | 4 | ...... | ...... | ... |
| Ruddy Duck | ...... | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ... |
| Hooded Merganser | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | 6 | ... |
| Red-brst. Merganser | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ... |
| Turkey Vulture | ...... | 34 | 3 | 12 | 3 | ...... | 2 | 6 | 7 | |
| Black Vulture | 1 | 14 | ...... | 3 | 2 | ...... | 12 | 3 | ...... | ... |
| Mississippi Kite | 3 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ... |
| Cooper's Hawk | 2 | ...... | ...... | 1 | 1 | 2 | ...... | ...... | ...... | ... |
| Red-tailed Hawk | ...... | 2 | 1 | 6 | 2 | 1 | ...... | ...... | ...... | ... |
| Red-shldr. Hawk | 2 | 2 | ...... | ...... | 2 | ...... | ...... | 2 | ...... | |
| Broad-winged Hawk | ...... | 2 | ...... | 1 | 1 | ...... | 1 | 1 | ...... | ... |
| Osprey | ...... | ...... | ...... | 4 | ...... | 1 | 1 | ...... | ...... | |
| Sparrow Hawk | 1 | 5 | 2 | 9 | 4 | 1 | 3 | 4 | 3 | |
| Ruffed Grouse | ...... | ...... | ...... | ...... | ...... | 1 | 7 | ...... | 3 | |
| Bobwhite | 10 | 14 | ...... | 15 | 37 | 64 | 23 | 20 | 38 | |
| Ring-necked Pheasant | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | |
| King Rail | ...... | ...... | ...... | ...... | 4 | ...... | ...... | ...... | ...... | |
| Virginia Rail | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ... |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ora | 2 | 1 | ...... | 1 | 2 | 1 | ...... | ...... | ...... | 1 |
| urple Gallinule | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... |
| ommon Gallinule | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... |
| merican Coot | 10 | 1 | ...... | 3 | ...... | ...... | ...... | ...... | ...... | ...... |
| emipal. Plover | 151 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| illdeer | 12 | 4 | 3 | 14 | 16 | 29 | 15 | 4 | 12 | 14 |
| m. Golden Plover | 65 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| merican Woodcock | ...... | ...... | ...... | 4 | ...... | 1 | ...... | ...... | ...... | ...... |
| ommon Snipe | 1 | ...... | ...... | 11 | 2 | 11 | 1 | ...... | ...... | 7 |
| pland Plover | ...... | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| potted Sandpiper | 4 | 10 | ...... | 13 | 5 | 12 | 4 | 2 | ...... | 15 |
| olitary Sandpiper | 3 | 8 | 1 | 12 | 8 | 27 | 9 | 3 | ...... | 28 |
| illet | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 27 |
| r. Yellowlegs | 17 | ...... | ...... | 25 | 2 | 24 | 2 | 1 | ...... | ...... |
| sr. Yellowlegs | 5 | 2 | ...... | 38 | 5 | 21 | ...... | 1 | ...... | ...... |
| ect. Sandpiper | 78 | ...... | ...... | ...... | 1 | 7 | ...... | ...... | ...... | ...... |
| east Sandpiper | 102 | ...... | ...... | 6 | 2 | 4 | 3 | ...... | ...... | 2 |
| h.-billed Dowitcher | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| emipal. Sandpiper | 5 | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| ed Phalarope | ...... | ...... | ...... | ...... | ...... | ...... | 4 | ...... | ...... | ...... |
| ilson's Phalarope | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... |
| ing-billed Gull | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... |
| erring Gull | ...... | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| aughing Gull | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... |
| orster's Tern | ...... | ...... | ...... | ...... | ...... | ...... | 4 | ...... | ...... | ...... |
| lack Tern | 38 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| ourning Dove | 39 | 23 | 36 | 58 | 38 | 202 | 40 | 34 | 72 | 25 |
| el-bld. Cuckoo | 4 | 6 | ...... | 9 | 7 | 7 | 3 | 10 | 7 | 3 |
| l.-bld. Cuckoo | 1 | ...... | ...... | 1 | 1 | 3 | 1 | ...... | ...... | 1 |
| creech Owl | 2 | ...... | ...... | ...... | ...... | 1 | 2 | ...... | ...... | 1 |
| r. Horned Owl | 5 | 1 | ...... | 1 | 1 | ...... | 1 | ...... | ...... | ...... |
| arred Owl | ...... | 2 | ...... | 3 | ...... | ...... | ...... | ...... | ...... | ...... |
| huck-will's Widow | 7 | 6 | 4 | ...... | 4 | 2 | 2 | 1 | ...... | 1 |
| hip-poor-will | 6 | 19 | 1 | 13 | 1 | ...... | 1 | 1 | ...... | 13 |
| om. Nighthawk | ...... | 2 | ...... | 3 | 9 | 1 | 6 | 6 | 10 | 1 |
| himney Swift | 33 | 86 | 44 | 446 | 210 | 437 | 55 | 36 | 47 | 64 |
| uby-th. Hummingbird | 1 | 3 | ...... | 4 | 8 | 4 | 1 | 3 | ...... | 2 |
| elted Kingfisher | 1 | 5 | 1 | 7 | 2 | 12 | 2 | 3 | 4 | 7 |
| el.-sh. Flicker | 3 | 2 | 29 | 16 | 22 | 70 | 11 | 25 | 43 | 38 |
| ileated Woodpecker | 5 | 7 | 7 | 11 | 12 | 11 | 8 | 6 | 3 | 2 |
| ed-bd. Woodpecker | 17 | 5 | 17 | 40 | 28 | 16 | 6 | 5 | 3 | 3 |
| ed-hd. Woodpecker | 16 | ...... | 6 | 7 | 5 | 8 | 6 | 2 | 6 | ...... |
| el.-bel. Sapsucker | ...... | ...... | 2 | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| airy Woodpecker | 2 | 2 | 2 | 3 | 4 | 2 | 1 | 2 | 1 | 1 |
| owny Woodpecker | 8 | 7 | 14 | 15 | 18 | 10 | 5 | 6 | 10 | 8 |
| ed-Coc. Woodpecker | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... |
| Kingbird | 12 | 7 | 6 | 19 | 19 | 22 | 8 | 6 | 9 | 7 |
| r. Crest. Flycatcher | 34 | 5 | 4 | 32 | 33 | 23 | 9 | 17 | 1 | 1 |
| Phoebe | 4 | 9 | 4 | 9 | 17 | 16 | 16 | 8 | 3 | 8 |
| el.-bel. Flycatcher | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| cadian Flycatcher | 11 | 9 | ...... | 15 | 5 | ...... | ...... | 7 | ...... | ...... |
| raill's Flycatcher | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |

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|---|---|---|---|---|---|---|---|---|---|---|
| Common Loon | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... |
| Pied-billed Grebe | 1 | 1 | ...... | 4 | 1 | ...... | ...... | 1 | ...... | 1 |
| Great Blue Heron | 4 | 2 | ...... | 2 | ...... | 3 | 1 | 1 | ...... | ...... |
| Common Egret | 48 | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| Green Heron | 2 | 6 | ...... | 11 | 2 | 11 | 3 | 3 | ...... | 3 |
| Bl.-cr. Night Heron | ...... | ...... | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... |
| Yel.-cr. Night Heron | ...... | 1 | ...... | 5 | ...... | 2 | 2 | ...... | ...... | ...... |
| Least Bittern | ...... | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... | ...... |
| American Bittern | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Canada Goose | ...... | ...... | ...... | ...... | ...... | ...... | 8 | ...... | ...... | ...... |
| Mallard | ...... | ...... | ...... | 4 | 1 | 4 | ...... | ...... | 6 | 7 |
| Black Duck | ...... | ...... | ...... | ...... | ...... | ...... | 3 | ...... | ...... | ...... |
| Bluewinged Teal | 25 | 11 | ...... | 39 | 3 | 4 | ...... | ...... | ...... | 6 |
| American Widgeon | 5 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Shoveler | 2 | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| Wood Duck | 8 | 16 | ...... | 17 | 2 | 2 | 2 | 10 | ...... | 6 |
| Redhead | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Ring-necked Duck | 2 | ...... | ...... | ...... | 21 | ...... | ...... | ...... | ...... | ...... |
| Lesser Scaup | 2 | ...... | 5 | 3 | ...... | 1 | 4 | ...... | ...... | ...... |
| Ruddy Duck | ...... | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Hooded Merganser | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | 6 | ...... |
| Red-brst. Merganser | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Turkey Vulture | ...... | 34 | 3 | 12 | 3 | ...... | 2 | 6 | 7 | 1 |
| Black Vulture | 1 | 14 | ...... | 3 | 2 | ...... | 12 | 3 | ...... | ...... |
| Mississippi Kite | 3 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Cooper's Hawk | 2 | ...... | ...... | 1 | 1 | 2 | ...... | ...... | ...... | ...... |
| Red-tailed Hawk | ...... | 2 | 1 | 6 | 2 | 1 | ...... | ...... | ...... | ...... |
| Red-shldr. Hawk | 2 | 2 | ...... | ...... | 2 | ...... | ...... | 2 | ...... | 1 |
| Broad-winged Hawk | ...... | 2 | ...... | 1 | 1 | ...... | 1 | 1 | ...... | ...... |
| Osprey | ...... | ...... | ...... | 4 | ...... | 1 | 1 | ...... | ...... | 2 |
| Sparrow Hawk | 1 | 5 | 2 | 9 | 4 | 1 | 3 | 4 | 3 | 1 |
| Ruffed Grouse | ...... | ...... | ...... | ...... | ...... | 1 | 7 | ...... | 3 | 2 |
| Bobwhite | 10 | 14 | ...... | 15 | 37 | 64 | 23 | 20 | 38 | 22 |
| Ring-necked Pheasant | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 5 |
| King Rail | ...... | ...... | ...... | ...... | 4 | ...... | ...... | ...... | ...... | 1 |
| Virginia Rail | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... |
| Sora | 2 | 1 | ...... | 1 | 2 | 1 | ...... | ...... | ...... | 1 |
| Purple Gallinule | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... |
| Common Gallinule | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... |
| American Coot | 10 | 1 | ...... | 3 | ...... | ...... | ...... | ...... | ...... | ...... |
| Semipal. Plover | 151 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Killdeer | 12 | 4 | 3 | 14 | 16 | 29 | 15 | 4 | 12 | 14 |
| Am. Golden Plover | 65 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| American Woodcock | ...... | ...... | ...... | 4 | ...... | 1 | ...... | ...... | ...... | ...... |
| Common Snipe | 1 | ...... | ...... | 11 | 2 | 11 | 1 | ...... | ...... | 7 |
| Upland Plover | ...... | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Spotted Sandpiper | 4 | 10 | ...... | 13 | 5 | 12 | 4 | 2 | ...... | 15 |
| Solitary Sandpiper | 3 | 8 | 1 | 12 | 8 | 27 | 9 | 3 | ...... | 28 |
| Willet | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 27 |
| Gr. Yellowlegs | 17 | ...... | ...... | 25 | 2 | 24 | 2 | 1 | ...... | ...... |
| Lsr. Yellowlegs | 5 | 2 | ...... | 38 | 5 | 21 | ...... | 1 | ...... | ...... |
| Pect. Sandpiper | 78 | ...... | ...... | ...... | 1 | 7 | ...... | ...... | ...... | ...... |
| Least Sandpiper | 102 | ...... | ...... | 6 | 2 | 4 | 3 | ...... | ...... | 2 |
| Sh.-billed Dowitcher | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Semipal. Sandpiper | 5 | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Red Phalarope | ...... | ...... | ...... | ...... | ...... | ...... | 4 | ...... | ...... | ...... |
| Wilson's Phalarope | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... |
| Ring-billed Gull | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... |
| Herring Gull | ...... | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Laughing Gull | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... |
| Forster's Tern | ...... | ...... | ...... | ...... | ...... | ...... | 4 | ...... | ...... | ...... |
| Black Tern | 38 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Mourning Dove | 39 | 23 | 36 | 58 | 38 | 202 | 40 | 34 | 72 | 25 |
| Yel-bld. Cuckoo | 4 | 6 | ...... | 9 | 7 | 7 | 3 | 10 | 7 | 3 |
| Bl.-bld. Cuckoo | 1 | ...... | ...... | 1 | 1 | 3 | 1 | ...... | ...... | 1 |
| Screech Owl | 2 | ...... | ...... | ...... | ...... | 1 | 2 | ...... | ...... | 1 |
| Gr. Horned Owl | 5 | 1 | ...... | 1 | 1 | ...... | 1 | ...... | ...... | ...... |
| Barred Owl | ...... | 2 | ...... | 3 | ...... | ...... | ...... | ...... | ...... | ...... |
| Chuck-will's Widow | 7 | 6 | 4 | ...... | 4 | 2 | 2 | 1 | ...... | 1 |
| Whip-poor-will | 6 | 19 | 1 | 13 | 1 | ...... | 1 | 1 | ...... | 13 |
| Com. Nighthawk | ...... | 2 | ...... | 3 | 9 | 1 | 6 | 6 | 10 | 1 |
| Chimney Swift | 33 | 86 | 44 | 446 | 210 | 437 | 55 | 36 | 47 | 64 |
| Ruby-th. Hummingbird | 1 | 3 | ...... | 4 | 8 | 4 | 1 | 3 | ...... | 2 |
| Belted Kingfisher | 1 | 5 | 1 | 7 | 2 | 12 | 2 | 3 | 4 | 7 |
| Yel.-sh. Flicker | 3 | 2 | 29 | 16 | 22 | 70 | 11 | 25 | 43 | 38 |
| Pileated Woodpecker | 5 | 7 | 7 | 11 | 12 | 11 | 8 | 6 | 3 | 2 |
| Red-bd. Woodpecker | 17 | 5 | 17 | 40 | 28 | 16 | 6 | 5 | 3 | 3 |
| Red-hd. Woodpecker | 16 | ...... | 6 | 7 | 5 | 8 | 6 | 2 | 6 | ...... |
| Yel.-bel. Sapsucker | ...... | ...... | 2 | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| Hairy Woodpecker | 2 | 2 | 2 | 3 | 4 | 2 | 1 | 2 | 1 | 1 |
| Downy Woodpecker | 8 | 7 | 14 | 15 | 18 | 10 | 5 | 6 | 10 | 8 |
| Red-Coc. Woodpecker | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... |
| E. Kingbird | 12 | 7 | 6 | 19 | 19 | 22 | 8 | 6 | 9 | 7 |
| Gr. Crest. Flycatcher | 34 | 5 | 4 | 32 | 33 | 23 | 9 | 17 | 1 | 1 |
| E. Phoebe | 4 | 9 | 4 | 9 | 17 | 16 | 16 | 8 | 3 | 8 |
| Yel.-bel. Flycatcher | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| Acadian Flycatcher | 11 | 9 | ...... | 15 | 5 | ...... | ...... | 7 | ...... | ...... |
| Traill's Flycatcher | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Least Flycatcher | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| E. Wood Pewee | 21 | 9 | ...... | 4 | 27 | 4 | ...... | 8 | 3 |
| Horned Lark | 5 | 2 | 4 | 1 | 5 | 7 | 6 | 6 | ...... |
| Tree Swallow | 1938 | 9 | ...... | 3 | ...... | 13 | ...... | ...... | ...... |
| Bank Swallow | 64 | 8 | 8 | ...... | ...... | 21 | ...... | ...... | ...... |
| Rough-w. Swallow | 46 | 14 | ...... | 17 | 27 | 71 | ...... | 8 | 25 |
| Barn Swallow | 65 | 177 | 15 | 137 | 6 | 93 | 65 | 13 | 53 |
| Cliff Swallow | ...... | ...... | ...... | 57 | 50 | 3 | ...... | ...... | ...... |
| Purple Martin | 7 | 1 | 4 | 30 | 41 | 218 | 4 | 30 | ...... |
| Blue Jay | 33 | 32 | 80 | 97 | 95 | 303 | 19 | 69 | 103 |
| Common Raven | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Common Crow | 39 | 42 | 62 | 62 | 37 | 207 | 28 | 47 | 73 |
| Fish Crow | 6 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Carolina Chickadee | 18 | 11 | 25 | 43 | 24 | 87 | 33 | 26 | 22 |
| Tufted Titmouse | 12 | 15 | 32 | 50 | 53 | 94 | 12 | 43 | 34 |
| Wh.-br. Nuthatch | 4 | 3 | 12 | 3 | 10 | 2 | ...... | ...... | 3 |
| Red-br. Nuthatch | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Brown Creeper | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... |
| House Wren | ...... | ...... | ...... | ...... | ...... | 2 | 2 | 8 | 8 |
| Winter Wren | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Bewick's Wren | ...... | 1 | ...... | 3 | 2 | ...... | 1 | ...... | ...... |
| Carolina Wren | 13 | 3 | 14 | 14 | 35 | 110 | 9 | 31 | 4 |
| Long-bil. Marsh Wren | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... |
| Short-bil. Marsh Wren | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| Mockingbird | 9 | 14 | 13 | 82 | 45 | 181 | 18 | 43 | 89 |
| Catbird | 3 | 9 | 10 | 26 | 26 | 32 | 6 | 25 | 28 |
| Brown Thrasher | 5 | 10 | 20 | 35 | 35 | 105 | 19 | 33 | 54 |
| Robin | 3 | 26 | 50 | 69 | 75 | 348 | 31 | 44 | 134 |
| Wood Thrush | 16 | 6 | 9 | 26 | 52 | 96 | 14 | 39 | 39 |
| Swainson's Thrush | 4 | 6 | ...... | 6 | 20 | 20 | ...... | 6 | ...... |
| Gray-cheeked Thush | 4 | 1 | ...... | 1 | 1 | 1 | ...... | ...... | ...... |
| Veery | 1 | 6 | ...... | ...... | 10 | 1 | ...... | ...... | ...... |
| E. Bluebird | ...... | 7 | 17 | 35 | 36 | 38 | 14 | 1 | ...... |
| Bl.-gr. Gnatcatcher | 21 | 30 | 7 | 67 | 37 | 14 | 12 | 6 | ...... |
| Ruby-cr. Kinglet | ...... | ...... | ...... | 3 | ...... | 6 | ...... | ...... | ...... |
| Cedar Waxwing | ...... | ...... | ...... | ...... | 5 | 30 | 25 | 22 | 2 |
| Loggerhead Shrike | 5 | 8 | 4 | 22 | 8 | 5 | ...... | ...... | ...... |
| Starling | FC | 1250 | 86 | 622 | 296 | 1358 | 95 | 24 | 616 |
| White-eyed Vireo | 16 | 6 | 2 | 34 | 34 | 26 | 1 | 9 | 2 |
| Yel.-th. Vireo | 11 | 3 | ...... | 5 | 9 | 9 | ...... | 2 | ...... |
| Solitary Vireo | ...... | ...... | ...... | ...... | ...... | 1 | 8 | ...... | ...... |
| Red-eyed Vireo | 20 | 18 | 12 | 38 | 100 | 98 | ...... | 52 | 10 |
| Warbling Vireo | 23 | ...... | ...... | 2 | ...... | ...... | ...... | 3 | ...... |
| Bl. & Wh. Warbler | 1 | 11 | 1 | 6 | 21 | 17 | 3 | 9 | ...... |
| Prothonotary Warbler | 27 | 6 | ...... | 16 | 5 | 2 | ...... | ...... | ...... |
| Swainson's Warbler | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Worm-eating Warbler | ...... | 9 | ...... | ...... | ...... | 7 | 1 | 6 | ...... |
| Golden-wing. Warbler | ...... | 2 | ...... | 2 | 4 | 2 | ...... | ...... | ...... |
| Blue-wing. Warbler | ...... | 6 | ...... | 7 | 11 | 2 | ...... | ...... | ...... |
| Tennessee Warbler | 40 | 6 | ...... | 23 | 9 | 8 | ...... | 4 | ...... |
| Nashville Warbler | ...... | ...... | ...... | 4 | 1 | 4 | ...... | ...... | ...... |
| Parula Warbler | 8 | 1 | ...... | 8 | 3 | 6 | ...... | 10 | ...... |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ellow Warbler | 10 | 8 | 2 | 9 | 10 | 29 | 8 | 31 | 4 | 29 |
| agnolia Warbler | ...... | 1 | ...... | 2 | 4 | 1 | ...... | ...... | ...... | 3 |
| ape May Warbler | ...... | ...... | ...... | ...... | 27 | 1 | ...... | 2 | ...... | ...... |
| .-th. Blue Warbler | ...... | ...... | ...... | ...... | ...... | 2 | ...... | ...... | ...... | 13 |
| yrtle Warbler | 9 | 3 | ...... | 40 | 24 | 89 | 7 | 4 | ...... | 10 |
| .-th. Green Warbler | 5 | 1 | ...... | 2 | 3 | 9 | ...... | 4 | ...... | 4 |
| erulean Warbler | 13 | 18 | ...... | 20 | ...... | 2 | 1 | 10 | ...... | 2 |
| lackb. Warbler | ...... | 1 | 1 | 1 | 3 | 8 | 1 | 2 | ...... | ...... |
| ellowth. Warbler | 5 | 4 | 10 | 14 | 13 | 2 | ...... | 3 | ...... | ...... |
| hestnut-sided Warbler | ...... | 1 | ...... | 1 | 15 | 9 | ...... | ...... | ...... | 18 |
| ay-breasted Warbler | 1 | 1 | ...... | ...... | 8 | 3 | ...... | 2 | ...... | ...... |
| lackpoll Warbler | 48 | 1 | ...... | 1 | 27 | ...... | ...... | 11 | ...... | ...... |
| ine Warbler | ...... | ...... | ...... | 1 | 4 | 3 | 1 | 1 | ...... | ...... |
| rairie Warbler | ...... | 6 | ...... | 19 | 33 | 37 | 2 | 6 | ...... | 4 |
| alm Warbler | 22 | 6 | ...... | 17 | 30 | 17 | 2 | ...... | ...... | ...... |
| venbird | ...... | ...... | ...... | ...... | 22 | 3 | 2 | 6 | ...... | 20 |
| o. Water Thrush | 3 | 2 | ...... | 2 | 2 | ...... | ...... | ...... | ...... | ...... |
| a. Water Thrush | 5 | 7 | ...... | 24 | 7 | 6 | 5 | 5 | ...... | 3 |
| y. Warbler | 10 | 14 | ...... | 35 | 24 | 13 | 1 | 10 | ...... | 1 |
| onn. Warbler | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... |
| ourning Warbler | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... |
| ellowthroat | 56 | 18 | ...... | 41 | 21 | 54 | 18 | 18 | 2 | 29 |
| el.-br. Chat | 18 | 15 | ...... | 46 | 41 | 69 | 9 | 45 | 1 | 22 |
| ooded Warbler | 2 | 8 | ...... | ...... | 9 | 7 | ...... | 5 | 2 | 8 |
| ilson's Warbler | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... |
| anada Warbler | ...... | ...... | ...... | ...... | 3 | 1 | ...... | 1 | ...... | 3 |
| m. Redstart | 23 | 11 | ...... | 9 | 1 | 12 | 1 | 13 | ...... | 8 |
| ouse Sparrows | FC | 50 | 78 | 55 | 90 | 280 | 23 | 56 | 275 | 74 |
| bolink | 21 | 1 | ...... | 16 | 155 | 28 | 5 | ...... | ...... | 6 |
| Meadowlark | 25 | 65 | 49 | 211 | 73 | 558 | 200 | 33 | 154 | 77 |
| edwing Blackbird | C | 40 | 30 | 121 | 82 | 403 | 46 | 38 | 60 | 76 |
| rchard Oriole | 32 | 20 | 15 | 29 | 26 | 34 | 12 | 18 | 10 | 5 |
| altimore Oriole | 34 | 8 | ...... | 3 | 11 | 5 | 2 | 5 | 15 | 2 |
| usty Blackbird | ...... | ...... | 2 | ...... | ...... | 3 | ...... | ...... | ...... | 5 |
| mmon Grackle | C | 400 | 54 | 487 | 67 | 658 | 75 | 94 | 868 | 224 |
| rown-hd. Cowbird | 24 | 70 | 30 | 91 | 60 | 146 | 3 | 70 | 6 | 21 |
| arlet Tanager | 2 | 7 | 3 | 12 | 16 | 11 | 3 | 5 | 5 | 5 |
| mmer Tanager | 14 | 6 | 13 | 27 | 27 | 27 | 4 | 19 | 7 | ...... |
| ardinal | C | 34 | 96 | 145 | 93 | 431 | 54 | 102 | 135 | 66 |
| se-br. Grosbeak | 14 | 22 | 2 | 8 | 26 | 10 | 6 | ...... | ...... | 8 |
| lue Grosbeak | ...... | ...... | ...... | ...... | 14 | 4 | ...... | 2 | ...... | ...... |
| digo Bunting | 129 | 40 | 20 | 95 | 77 | 90 | 16 | 71 | 36 | 3 |
| ickcissel | 124 | 16 | ...... | 11 | 4 | 2 | 1 | ...... | ...... | ...... |
| rple Finch | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| ine Siskin | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 2 |
| m. Goldfinch | 15 | 18 | 27 | 81 | 96 | 320 | 42 | 23 | 24 | 61 |
| ufus-sd. Towhee | 3 | 15 | 52 | 76 | 51 | 244 | 39 | 36 | 32 | 62 |
| vannah Sparrow | 1 | 14 | ...... | 22 | 2 | 29 | 20 | ...... | ...... | 16 |
| rasshopper Sparrow | ...... | 6 | ...... | 2 | 30 | 8 | 10 | 7 | ...... | 12 |
| Count's Sparrow | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| esper Sparrow | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 2 |
| achman's Sparrow | ...... | ...... | ...... | ...... | 3 | ...... | ...... | 2 | ...... | ...... |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Least Flycatcher | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| E. Wood Pewee | 21 | 9 | ...... | 4 | 27 | 4 | ...... | 8 | 3 |
| Horned Lark | 5 | 2 | 4 | 1 | 5 | 7 | 6 | 6 | ...... |
| Tree Swallow | 1938 | 9 | ...... | 3 | ...... | 13 | ...... | ...... | ...... |
| Bank Swallow | 64 | 8 | 8 | ...... | ...... | 21 | ...... | ...... | ...... |
| Rough-w. Swallow | 46 | 14 | ...... | 17 | 27 | 71 | ...... | 8 | 25 |
| Barn Swallow | 65 | 177 | 15 | 137 | 6 | 93 | 65 | 13 | 53 |
| Cliff Swallow | ...... | ...... | ...... | 57 | 50 | 3 | ...... | ...... | ...... |
| Purple Martin | 7 | 1 | 4 | 30 | 41 | 218 | 4 | 30 | ...... |
| Blue Jay | 33 | 32 | 80 | 97 | 95 | 303 | 19 | 69 | 103 |
| Common Raven | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Common Crow | 39 | 42 | 62 | 62 | 37 | 207 | 28 | 47 | 73 |
| Fish Crow | 6 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Carolina Chickadee | 18 | 11 | 25 | 43 | 24 | 87 | 33 | 26 | 22 |
| Tufted Titmouse | 12 | 15 | 32 | 50 | 53 | 94 | 12 | 43 | 34 |
| Wh.-br. Nuthatch | 4 | 3 | 12 | 3 | 10 | 2 | ...... | ...... | 3 |
| Red-br. Nuthatch | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Brown Creeper | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... |
| House Wren | ...... | ...... | ...... | ...... | ...... | 2 | 2 | 8 | 8 |
| Winter Wren | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Bewick's Wren | ...... | 1 | ...... | 3 | 2 | ...... | 1 | ...... | ...... |
| Carolina Wren | 13 | 3 | 14 | 14 | 35 | 110 | 9 | 31 | 4 |
| Long-bil. Marsh Wren | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... |
| Short-bil. Marsh Wren | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| Mockingbird | 9 | 14 | 13 | 82 | 45 | 181 | 18 | 43 | 89 |
| Catbird | 3 | 9 | 10 | 26 | 26 | 32 | 6 | 25 | 28 |
| Brown Thrasher | 5 | 10 | 20 | 35 | 35 | 105 | 19 | 33 | 54 |
| Robin | 3 | 26 | 50 | 69 | 75 | 348 | 31 | 44 | 134 |
| Wood Thrush | 16 | 6 | 9 | 26 | 52 | 96 | 14 | 39 | 39 |
| Swainson's Thrush | 4 | 6 | ...... | 6 | 20 | 20 | ...... | 6 | ...... |
| Gray-cheeked Thush | 4 | 1 | ...... | 1 | 1 | 1 | ...... | ...... | ...... |
| Veery | 1 | 6 | ...... | ...... | 10 | 1 | ...... | ...... | ...... |
| E. Bluebird | ...... | 7 | 17 | 35 | 36 | 38 | 14 | 1 | ...... |
| Bl.-gr. Gnatcatcher | 21 | 30 | 7 | 67 | 37 | 14 | 12 | 6 | ...... |
| Ruby-cr. Kinglet | ...... | ...... | ...... | 3 | ...... | 6 | ...... | ...... | ...... |
| Cedar Waxwing | ...... | ...... | ...... | ...... | 5 | 30 | 25 | 22 | 2 |
| Loggerhead Shrike | 5 | 8 | 4 | 22 | 8 | 5 | ...... | ...... | ...... |
| Starling | FC | 1250 | 86 | 622 | 296 | 1358 | 95 | 24 | 616 |
| White-eyed Vireo | 16 | 6 | 2 | 34 | 34 | 26 | 1 | 9 | 2 |
| Yel.-th. Vireo | 11 | 3 | ...... | 5 | 9 | 9 | ...... | 2 | ...... |
| Solitary Vireo | ...... | ...... | ...... | ...... | ...... | 1 | 8 | ...... | ...... |
| Red-eyed Vireo | 20 | 18 | 12 | 38 | 100 | 98 | ...... | 52 | 10 |
| Warbling Vireo | 23 | ...... | ...... | 2 | ...... | ...... | ...... | 3 | ...... |
| Bl. & Wh. Warbler | 1 | 11 | 1 | 6 | 21 | 17 | 3 | 9 | ...... |
| Prothonotary Warbler | 27 | 6 | ...... | 16 | 5 | 2 | ...... | ...... | ...... |
| Swainson's Warbler | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Worm-eating Warbler | ...... | 9 | ...... | ...... | ...... | 7 | 1 | 6 | ...... |
| Golden-wing. Warbler | ...... | 2 | ...... | 2 | 4 | 2 | ...... | ...... | ...... |
| Blue-wing. Warbler | ...... | 6 | ...... | 7 | 11 | 2 | ...... | ...... | ...... |
| Tennessee Warbler | 40 | 6 | ...... | 23 | 9 | 8 | ...... | 4 | ...... |
| Nashville Warbler | ...... | ...... | ...... | 4 | 1 | 4 | ...... | ...... | ...... |
| Parula Warbler | 8 | 1 | ...... | 8 | 3 | 6 | ...... | 10 | ...... |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Yellow Warbler | 10 | 8 | 2 | 9 | 10 | 29 | 8 | 31 | 4 | 29 |
| Magnolia Warbler | ...... | 1 | ...... | 2 | 4 | 1 | ...... | ...... | ...... | 3 |
| Cape May Warbler | ...... | ...... | ...... | ...... | 27 | 1 | ...... | 2 | ...... | ...... |
| Bl.-th. Blue Warbler | ...... | ...... | ...... | ...... | ...... | 2 | ...... | ...... | ...... | 13 |
| Myrtle Warbler | 9 | 3 | ...... | 40 | 24 | 89 | 7 | 4 | ...... | 10 |
| Bl.-th. Green Warbler | 5 | 1 | ...... | 2 | 3 | 9 | ...... | 4 | ...... | 4 |
| Cerulean Warbler | 13 | 18 | ...... | 20 | | 2 | 1 | 10 | ...... | 2 |
| Blackb. Warbler | ...... | 1 | 1 | 1 | 3 | 8 | 1 | 2 | ...... | ...... |
| Yellowth. Warbler | 5 | 4 | 10 | 14 | 13 | 2 | ...... | 3 | ...... | ...... |
| Chestnut-sided Warbler | ...... | 1 | ...... | 1 | 15 | 9 | ...... | ...... | ...... | 18 |
| Bay-breasted Warbler | 1 | 1 | ...... | ...... | 8 | 3 | ...... | 2 | ...... | ...... |
| Blackpoll Warbler | 48 | 1 | ...... | 1 | 27 | | ...... | 11 | ...... | ...... |
| Pine Warbler | ...... | ...... | ...... | 1 | 4 | 3 | 1 | 1 | ...... | ...... |
| Prairie Warbler | ...... | 6 | ...... | 19 | 33 | 37 | 2 | 6 | ...... | 4 |
| Palm Warbler | 22 | 6 | ...... | 17 | 30 | 17 | 2 | ...... | ...... | ...... |
| Ovenbird | ...... | ...... | ...... | ...... | 22 | 3 | 2 | 6 | | 20 |
| No. Water Thrush | 3 | 2 | ...... | 2 | 2 | ...... | ...... | ...... | ...... | ...... |
| La. Water Thrush | 5 | 7 | ...... | 24 | 7 | 6 | 5 | 5 | ...... | 3 |
| Ky. Warbler | 10 | 14 | ...... | 35 | 24 | 13 | 1 | 10 | ...... | 1 |
| Conn. Warbler | ...... | ...... | ...... | ...... | 1 | | ...... | ...... | ...... | ...... |
| Mourning Warbler | ...... | ...... | ...... | ...... | ...... | | 1 | ...... | ...... | ...... |
| Yellowthroat | 56 | 18 | ...... | 41 | 21 | 54 | 18 | 18 | 2 | 29 |
| Yel.-br. Chat | 18 | 15 | ...... | 46 | 41 | 69 | 9 | 45 | 1 | 22 |
| Hooded Warbler | 2 | 8 | ...... | ...... | 9 | 7 | ...... | 5 | 2 | 8 |
| Wilson's Warbler | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... |
| Canada Warbler | ...... | ...... | ...... | ...... | 3 | 1 | ...... | 1 | ...... | 3 |
| Am. Redstart | 23 | 11 | ...... | 9 | 1 | 12 | 1 | 13 | ...... | 8 |
| House Sparrows | FC | 50 | 78 | 55 | 90 | 280 | 23 | 56 | 275 | 74 |
| Bobolink | 21 | 1 | ...... | 16 | 155 | 28 | 5 | ...... | ...... | 6 |
| E. Meadowlark | 25 | 65 | 49 | 211 | 73 | 558 | 200 | 33 | 154 | 77 |
| Redwing Blackbird | C | 40 | 30 | 121 | 82 | 403 | 46 | 38 | 60 | 76 |
| Orchard Oriole | 32 | 20 | 15 | 29 | 26 | 34 | 12 | 18 | 10 | 5 |
| Baltimore Oriole | 34 | 8 | ...... | 3 | 11 | 5 | 2 | 5 | 15 | 2 |
| Rusty Blackbird | ...... | ...... | 2 | ...... | ...... | 3 | ...... | ...... | ...... | 5 |
| Common Grackle | C | 400 | 54 | 487 | 67 | 658 | 75 | 94 | 868 | 224 |
| Brown-hd. Cowbird | 24 | 70 | 30 | 91 | 60 | 146 | 3 | 70 | 6 | 21 |
| Scarlet Tanager | 2 | 7 | 3 | 12 | 16 | 11 | 3 | 5 | 5 | 5 |
| Summer Tanager | 14 | 6 | 13 | 27 | 27 | 27 | 4 | 19 | 7 | ...... |
| Cardinal | C | 34 | 96 | 145 | 93 | 431 | 54 | 102 | 135 | 66 |
| Rose-br. Grosbeak | 14 | 22 | 2 | 8 | 26 | 10 | 6 | ...... | ...... | 8 |
| Blue Grosbeak | ...... | ...... | ...... | ...... | 14 | 4 | ...... | 2 | ...... | ...... |
| Indigo Bunting | 129 | 40 | 20 | 95 | 77 | 90 | 16 | 71 | 36 | 3 |
| Dickcissel | 124 | 16 | ...... | 11 | 4 | 2 | 1 | ...... | ...... | ...... |
| Purple Finch | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| Pine Siskin | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 2 |
| Am. Goldfinch | 15 | 18 | 27 | 81 | 96 | 320 | 42 | 23 | 24 | 61 |
| Rufus-sd. Towhee | 3 | 15 | 52 | 76 | 51 | 244 | 39 | 36 | 32 | 62 |
| Savannah Sparrow | 1 | 14 | ...... | 22 | 2 | 29 | 20 | ...... | ...... | 16 |
| Grasshopper Sparrow | ...... | 6 | ...... | 2 | 30 | 8 | 10 | 7 | ...... | 12 |
| LeCount's Sparrow | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| Vesper Sparrow | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 2 |
| Bachman's Sparrow | ...... | ...... | ...... | ...... | 3 | ...... | ...... | 2 | ...... | ...... |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Slate-cd. Junco | 1 | | 1 | | | | 50 | ...... | 4 | 57 |
| Chipping Sparrow | 3 | 14 | 18 | 117 | 33 | 116 | 13 | 4 | 4 | 25 |
| Field Sparrow | 27 | 28 | 40 | 39 | 39 | 97 | 38 | 35 | 20 | 36 |
| White-cr. Sparrow | | 8 | 2 | 10 | ...... | 11 | 10 | ...... | 1 | 24 |
| White-th. Sparrow | 4 | 16 | 46 | 130 | 60 | 328 | 45 | ...... | 21 | 56 |
| Swamp Sparrow | | 7 | ...... | 4 | 4 | 1 | 4 | ...... | | 10 |
| Song Sparrow | 1 | | 7 | | 16 | 216 | 28 | 55 | 55 | 87 |
| Total Individuals | 3981+ | 3145 | 1312 | 4723 | 3328 | 9215 | 1580 | 1520 | 3337 | 2482 |
| Total Species | 124 | 124 | 71 | 130 | 134 | 135 | 107 | 103 | 69 | 117 |

Total Species: 199 Total Individuals: 34,623

## ROUND TABLE NOTES

A KENTUCKY BIRD-FALL IN 1962.—The last two issues of THE MIGRANT contain accounts of migrating birds being killed by collision with television towers at Nashville. Most of these "bird-falls" occurred on the nights of 5-6 September, 5-6 October and 16-17-18 October, 1962; the kills being 160, 243 and 100 respectively. To these reports, I wish to add that of another that occurred at Magnolia, Ky., 100 miles NNE of Nashville, on the night of 25-26 of September, 1962. The kill there that night numbered 270 birds of 30 species, while at Nashville the fatalities on that and the following nights amounted to 8 and 6 respectively. A detailed account of this has just been published in the KENTUCKY WARBLER for May, 1963 (39:19-21), by Floyd Carpenter and Harvey B. Lovell. This "wave," which barely reached Nashville, was of particular interest in that it was caused neither by television towers or ceilometer beams, but by the lights within buildings. These buildings were those of the Tennessee Gas Transmission Co., and comprised their gas compressor station. The walls had large glazed areas and the buildings were brightly illuminated. A similar station is located at Portland, Tenn., 80 miles SW but my inquiry to them brought a reply that no such casualties had happened there.

The flight was brought on by a cold front which at 1 a.m. on 25 Sept., extended from Ft. Wayne, Ind., to just south of St. Louis "preceded and accompanied by wide-spread low ceilings, rain, and fog," according to a letter from the Louisville weather bureau. By 1 a.m. on 26 Sept., this front had moved south of both Kentucky and Tennessee. The passage across Kentucky was accompanied with winds from 7 to 10 m.p.h. and night temperatures of about 60 degrees. As described by employees at the plant, "The night of 25 Sept. was foggy, and between dark and midnight the men on watch heard birds pecking at the windows and some flew into the buildings. On going outdoors, they saw a great many birds flying around, so thick they looked like a cloud. It was also said that there was a noise high up that sounded like a strong wind."

The list of birds picked up and identified was as follows: Yellow-billed Cuckoo, 7; Catbird, 7; Wood Thrush, 1; Swainson's Thrush, 39; Grey-cheeked Thrush, 26; Veery, 2; Black-and-White Warbler, 2; Tennessee Warbler, 6; Magnolia Warbler, 3; Black-throated Blue Warbler, 1; Myrtle Warbler, 1; Black-throated Green Warbler, 1; Blackburnian Warbler, 4; Chestnut-sided Warbler, 2; Bay-breasted Warbler, 34; Prairie Warbler, 1; Palm Warbler, 6; Ovenbird, 30; Northern Waterthrush, 21; Mourning Warbler, 1; Yellowthroat, 7; Yellow-breasted Chat, 2; American Redstart, 2; Bobolink, 21; Scarlet Tanager, 23; Summer Tanager, 7; Rose-breasted Grosbeak, 7; Indigo

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Slate-cd. Junco | 1 | ...... | 1 | ...... | ...... | ...... | 50 | ...... | 4 | 5 |
| Chipping Sparrow | 3 | 14 | 18 | 117 | 33 | 116 | 13 | 4 | 4 | 2 |
| Field Sparrow | 27 | 28 | 40 | 39 | 39 | 97 | 38 | 35 | 20 | 3 |
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| White-th. Sparrow | 4 | 16 | 46 | 130 | 60 | 328 | 45 | ...... | 21 | 5 |
| Swamp Sparrow | ...... | 7 | ...... | 4 | 4 | 1 | 4 | ...... | ...... | 1 |
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Bunting, 3, and Song Sparrow, 1. Two specimens were identified as immature Blackpoll Warblers but were in such bad condition, their identification was not certain.

The tallest of the Nashville television towers (W. S. M.) is 1369 feet and the tallest, until recently, is the 1676 foot tower at Cape Girardeau, Mo. One was built at Columbus, Ga., in 1962, which soared to 1749 and current news reports say that a 1750 footer is being built at Knoxville, Tenn. Here's hoping that our Knoxville T.O.S. chapter will keep watch on this one.

ALBERT F. GANIER, 2112 Woodlawn Dr., Nashville 12, Tenn.

CHUCK-WILL'S-WIDOW NESTING IN AREA AGAIN.—During the months of May and June for several years we have listened to the song of the Chuck-will's-widow. Only twice have we been able to find their nest. The first one was found 23 June, 1960. For the next two years a diligent search was made for another nest but to no avail. 9 June, 1963 another one was found with two eggs. It was in a poplar grove with a few oaks and second growth timber. Under a red oak the nest was placed among some tree laps on the leaves just as they had fallen from the tree. The Chuck is not a builder but depends on nature to provide the requirements for a place to raise their young.

The nest was at an elevation of approximately 1550 feet on the south side of Holston River and about 200 yards from the river and approximately 50 feet above it, four miles east of Bluff City, in Sullivan County, Tennessee. There was no great concentration of foliage so the sunlight falls on the nest at various times during the day.

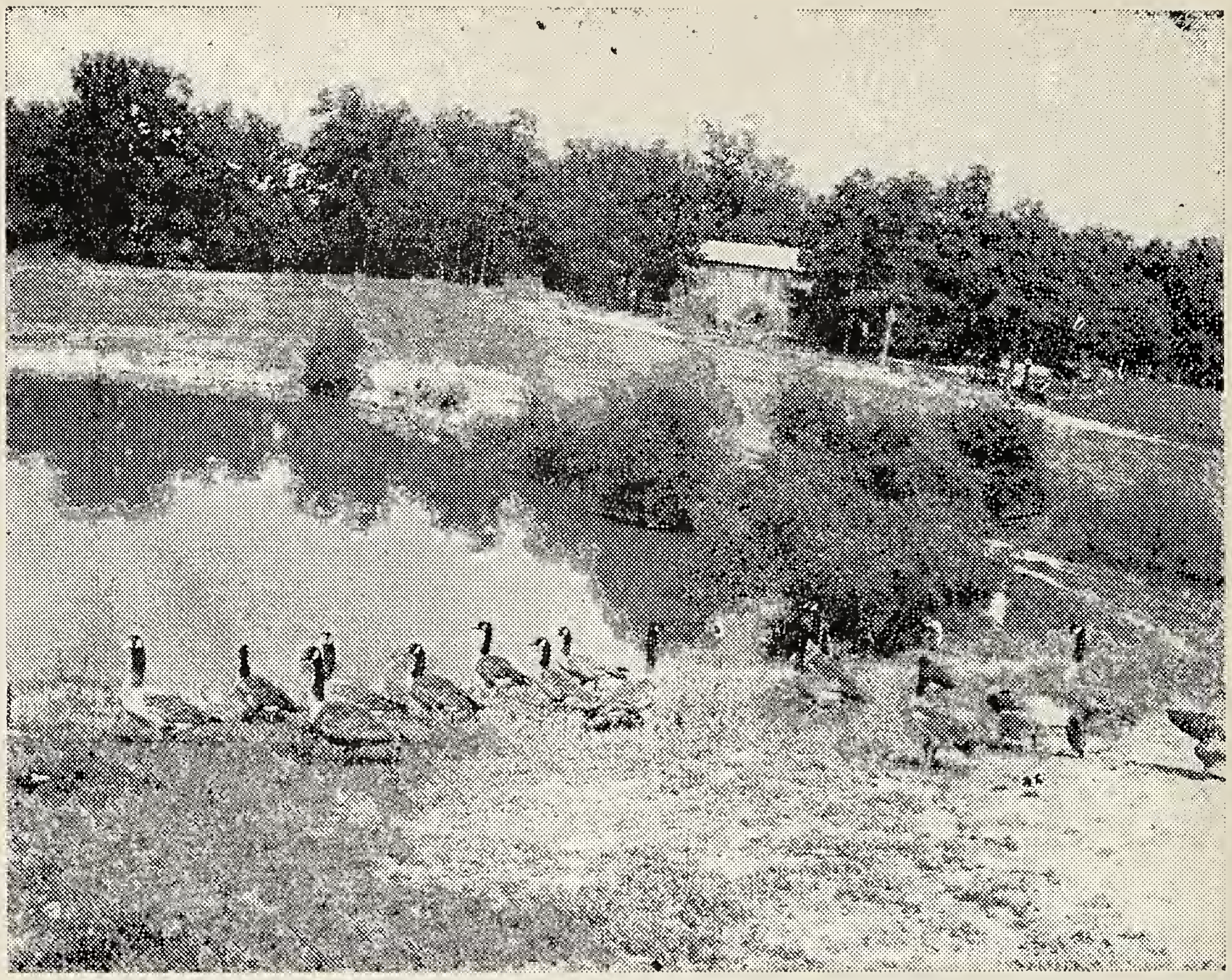
18 June the eggs hatched. The young were a rich honey brown color covered with down and about the size of a field sparrow with a mouth very large for a bird of this size. 25 June the young birds were able to walk away from the nest still covered with down except for their wings. They had a wing spread of approximately 10 inches. The birds were caught and banded. It takes a number three band for the Chuck and these young, had grown sufficiently to fill the band. The band number used was 643-56-305 and 643-56-306.

H. W. NUNLEY, Route 3, Bluff City, Tennessee

CANADA GEESE BREEDING IN GREENE COUNTY—In 1952 a flock of Canada Geese came to the farm pond of Mr. W. D. Guinn in Greene County. For some reason one of the Geese stayed at the pond with a Toulouse Goose when the rest of the flock left. Later a Canada Goose was shot and crippled on the Nolichucky River near Warrensburg. This crippled Goose was taken to Mr. Guinn's pond and in the spring of 1953 it mated with the Goose which had stayed at the pond the previous winter. A successful nest was made and goslings were raised.

The offspring of the Canada Geese mate with the Toulouse Geese and raise young. The cross-bred geese are easily distinguished from either the Canada or Toulouse Geese. The original pair never mate with either the Toulouse or the younger Canada Geese, but the younger Canada Geese and Toulouse do mate and raise cross-bred geese.

The flock now averages from 16 to 20. They are free to come and go and their wings are not clipped but there are always some present. Mr.



**Canada Geese, Toulouse Geese and cross-bred Canada-Toulouse Geese at farm pond of W. D. Guinn, Greeneville, Tenn. Photo by C. H. Richards, Soil Conservation Service, 1961.**

Guinn says that when they leave they always go to the south, he has never seen them leave in a northerly direction. The Nolichucky River is about 12 miles south of the Guinn farm. In an attempt to photograph this present nesting (1963) the photographer was put to flight by the gander. Later all of the 1963 nests were destroyed by dogs.

RICHARD NEVIUS, Route 3, Greeneville, Tennessee

UNUSUALLY LATE SPRING WATERFOWL, SHOREBIRD, GULL, AND TERN RECORDS—1963. — Through correspondence and speaking with various TOS members during the month of June, 1963, some very highly unusual records have been independently brought to my attention. Most of these records will no doubt be listed in **The Season** reports from the various localities, but it was thought it would be more vividly presented in this manner. The various species are noted in AOU check-list order.

To begin, it was of interest when I read a letter from Henry Parmer, of Nashville, stating he had an unusual looking Common Loon on Bush's Lake—two thirds winter and one third summer plumage—5 June. Also, one day, in the course of conversation with Wallace Coffey, Bristol, he mentioned finding on 1 June a dead Common Loon washing among bushes along the eastern shore of South Holston Lake, about one mile northeast of Observation Knob Park, Tennessee. Wallace's bird appeared to be dead from 2-5 days because when he returned at 4:30 PM, 2 June, it had decomposed considerably in comparison to the day before.

Other interesting records are of the late ducks. For instance, Mallards have been known to breed sparingly this far south, but Jim Campbell, Knoxville, Charlie Smith, Milligan College, and the writer were certainly surprised to come upon a pair and a single female at the Roan Creek area of Watauga Lake, 8 June. The single female was noted on Doe Creek, near the log bridge, and appeared to have young or eggs near by because she was very difficult to flush. When she did fly it was only to circle the area a bit returning to the same spot. To add to our astonishment this same day, a female Widgeon was also found feeding with the pair of Mallards.

Henry Parmer in his same above mentioned letter stated he also had a female Lesser Scaup present on Bush's Lake, 3, 5, & 6 June. The interest created by all of these birds present in June prompted the curiosity of the writer to check on Wilbur Lake which in the winter is a popular place for ducks and guess what was found on 12 June? A female Common Goldeneye!

The birds that initiated all of this checking were two Hooded Mergansers found in the Roan Creek area, 4 June. They appeared to be one year old birds because their crests were not fully developed and they were in the female plumage. In a letter received from Paul J. Adams, Crab Orchard, he mentioned identifying a male Hooded Merganser there 31 May.

There have been several records of Coot. Henry Parmer recorded one at Bush's Lake, 3, 5, & 6 June, and also L. O. Trabue had Coot on Old Hickory Lake 3 June (2 birds) and 8 June (3 birds). H. W. Nunley, Bluff City, reported he had three Coot spend the winter behind his home on the South Holston River with the last bird leaving 2 June.

Spotted Sandpipers have been known in the past to nest in our Upper East Tennessee area (THE MIGRANT 5: 51, 1934), but the writer wasn't very optimistic of ever finding a summer bird, let alone a nest. That attitude has been changed since finding three adults in the Roan Creek area each weekend 16 and 23 June and one on 30 June. The birds present were apparently not breeding, but the flight song was noted and will most certainly lead to more optimism on our part.

A single Greater Yellowlegs was present in the Roan Creek area on 4 June and word was also received that L. O. Trabue had on Old Hickory Lake Least Sandpipers, 3 June (1 bird) and 10 June (3 birds).

Mr. Trabue also had on Old Hickory Lake the following Ring-billed Gull records: 3 June (4 birds); 8 June (4 birds); and 16 June (2 birds). In addition, Mr. Trabue also identified on the lake three Caspian Terns, 16 June.

In summary, let us hope these are only a few of the unusual records noted throughout the state. This writer, for one, will certainly be looking forward with happy anticipation to all **The Season** reports when they are published in the September issue.

KENNETH H. DUBKE, 918 State Line Road, Elizabethton, Tennessee

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LATE WARBLERS AT NASHVILLE. — On the rainy Sunday morning of 26 May, 1963 the writer walked down his front steps and noticed a warbler in one of the two sugar maples. After getting thoroughly wet he identified it as a male Bay-breasted, Nashville's latest spring record. He then noticed more birds in the trees, so spent the biggest part of his time from 9:00 A.M. to 2:30 P.M. under the roof of his porch watching for birds.

The Bay-breasted was in and out of view for about 3 hours and at one time a female was seen for a while.

Around 9:15 a female Canada appeared. It would feed for a long time, then leave the yard and apparently return. A male came later and for about three hours there seemed to have been three different birds about. This is our second latest spring record for the species. About 9:30 a brilliant male Magnolia put in his appearance. He seemed to have stayed in the yard for nearly five hours, feeding all the time. Around 11:00 a Blackpoll came. It stayed but a short time. About that time Will Hon came by and reported he had just seen four of these warblers on Love hill, which is about a mile east.

About 11:30 a beautiful Blackburnian Warbler was seen. This male did not stay long. This is our second latest spring record for Nashville. About the same time a Black-throated Green appeared and stayed until 2:30. It fed constantly. It is also a second latest spring record. Around 12:30 a mature Chestnut-sided Warbler came, but stayed only for about a minute.

This gives a total of seven species of migrating warblers seen in just two trees on a very late date. As most of us here usually think of our migrating warblers as passing through between mid-March and the first few days of May the writer contacted Harry Monk as to late records. Mr. Monk furnished the following data on very late transients in the Nashville area.

| | |
|---|---|
| May 26 | Bay-breasted Warbler. 1963 by HEP |
| | Cape May Warbler. 1929 by Albert F. Ganier |
| | Connecticut Warbler. 1955 by Amelia R. Laskey |
| May 27 | Palm Warbler. 1950 by Harry C. Monk |
| | Wilson's Warbler. 1946 by HCM |
| May 28 | Canada Warbler. 1963 by Fairman Cumming |
| May 29 | Black-throated Green Warbler. 1919 by HCM |
| May 30 | Blackburnian Warbler. 1946 by HCM |
| May 31 | Magnolia Warbler. 1958 by HCM |
| | Chestnut-sided Warbler. 1949 by HCM |
| June 1 | Blackpoll Warbler. 1917 by George R. Mayfield |
| June 2 | Blackpoll Warbler. 1942 by GRM at home |
| June 3 | Mourning Warbler. 1956 by ARL (also at home on June 1&2) |
| June 4 | Mourning Warbler. 1936 by HCM at Centennial Park (also there on June 3) |

Above are twelve species of warblers, a third of our 36 species. They are listed in 12 years, a fourth of our 47 years of record keeping. Since most of these records are from just a few city yards that are but a minute part of our area it seems that many more "stragglers" must occur. Perhaps they are not as rare as they seem, but a normal part of migration, bringing up the rear of our spring migrations that begin here in mid-March, or earlier, and continuing perhaps until late May or even into early June.

HENRY E. PARMER, 3800 Richland Ave., Nashville 5, Tenn.

---

NORTHERN BIRDS REPEAT THEIR SUMMER STAY ON ROAN MOUNTAIN. — My favorite birding territory in the area of the Elizabethton Chapter of T.O.S. is on Roan Mountain at an elevation of from 5,800 to 6,000 feet.

It consists of an extensive sloping rhododendron - alder - briar patch, interspersed with balsam, spruce, mountain ash, hawthorn and service berry trees.

Systematic coverage over the last eight years has proven this habitat very interesting in the observation of northern birds.

Evening Grosbeak, Pine Siskin and Purple Finch, whenever they drifted this far south, made this territory and surrounding balsam and spruce forest their winter home.

During the winter of 1955-56, small numbers of Fox and White-throated sparrows were observed regularly among the alder and rhododendron or briars from 2 January to the end of April under at times rigorous weather conditions.

A year ago, the surprising presence of Purple Finch and Pine Siskin was noted in the area in summer. Small numbers of Purple Finches were heard singing and seen from 1 to 15 July, Pine Siskins calling and seen from 30 May to 15 July.

On regular checks this year, at least one Purple Finch was heard singing and/or seen on 12 and 19 May, 2, 9 and 23 June, and 4 and 7 July. One male each was seen on three of these dates including the latest. It could have in each instance been one and the same bird.

Two Pine Siskins were heard and seen together at close range on 6 and 9 June. A single bird each was heard and/or seen on 23 June and 7 July.

No evidence of nesting or breeding of the two species on Roan Mountain has been found. The habitat described lies entirely in North Carolina. The Purple Finch has not been observed on the Tennessee side of Roan Mountain during summer.

Year-around birds in the area under review are Slate-colored Junco, Red-breasted Nuthatch, and Golden-crowned Kinglet.

Abundant during the summer season are Robin, Winter Wren, Veery, Chestnut-sided, Black-throated Blue and Canada Warblers.

Encountered in lesser numbers are Cedar Waxwing and Solitary Vireo.

The Indigo Bunting, fairly numerous a year ago at elevations from 5,500 to above 6,000 ft. has not been in evidence there this late spring and summer, neither the Red Crossbill observed in the area for the first time 15 July and subsequently into early winter last year.

FRED W. BEHREND, 607 Range Street, Elizabethton, Tenn.

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WILLET ON WATAUGA LAKE. — While driving down the south side of Watauga Lake, toward Hampton, on 28 April 1963, a flock of 27 Willet *Catoptrophorus semipalmatus* was observed by this writer. The birds were all resting—non feeding—and were either standing motionless or leisurely stretching and preening their feathers affording particularly good views with both 10x50 binoculars and a 35 power Bausch & Lomb Telescope at 50 to 100 yards. At the time of observation, about 5:00 PM, the sky was overcast. No attempt was made to make the birds fly, however, their black and white wing patterns were very much in evidence when they stretched their wings and legs.

A search through THE MIGRANT reveals this to be the largest number of Willet seen at any one time, spring or fall, within the state of Tennessee. There are a total of ten records listed in THE MIGRANT, five in the spring and five in the fall. The spring records are as follows: one bird

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by Weise at Nashville, 25 Apr. 54, (**25**: 23, 1954); four at Sewanee, 24 Apr. 1956, (**27**: 40, 1956); seven on the Spring Count from Nashville, 27 Apr. 1957, (**28**: 23, 1957); one from Sandburg, 10 May 1958, (**29**: 28, 1958); and one individual by Parmer at Bush's Lake, Nashville, 28 Apr. 1958; (**29**: 53, 1958).

KENNETH H. DUBKE, 918 State Line Road, Elizabethton, Tennessee

ANOTHER GOSHAWK RECORD FOR MIDDLE TENNESSEE. — On March 14th, 1963 a mature male Goshawk was shot on the John Deck farm 2 miles from McEwen, Tenn. in Humphreys County. The bird was shot by a tenant who reported "it had been killing a chicken every day." The next day the bird was brought to the Children's Museum by our Game and Fish department. There it was sexed and made into a beautiful study skin by the museum's preparator, Alan Munro.

HENRY E. PARMER, 3800 Richland Ave., Nashville 5, Tennessee

## BOOK REVIEW

PUFFINS. By R. M. Lockley. A Doubleday Anchor Book. The American Museum of Natural History. Doubleday and Company, Inc., 575 Madison Ave., New York 22, New York. Publication date May 21, 1962. 222 pps. 12 plates. $1.25.

R. M. Lockley is a British ornithologist who with an associate has watched a "Puffinry" continuously day and night to observe first hand the habits of this North Atlantic Ocean bird. The Puffin is a black and white, web-footed fish-eating bird which resembles a miniature Penguin except the bill which gives the bird a somewhat clownish appearance. A rather complete life history is presented which includes courtship, nesting, incubation, feeding, migrations, life expectancy, distribution, numbers, arrival and departure dates, bandings, weights, measurements and moults.

The Puffin has many enemies and is in need of protection lest the remaining colonies be eradicated as some have already. Man has played an important role in their destruction by using them as food and by the introduction of predators to their nesting colonies.

Although the book summarizes very nicely the information available on the species and it is presented in an interesting and informative manner a great many stimulating questions have been raised but left unanswered.

LEE R. HERNDON.

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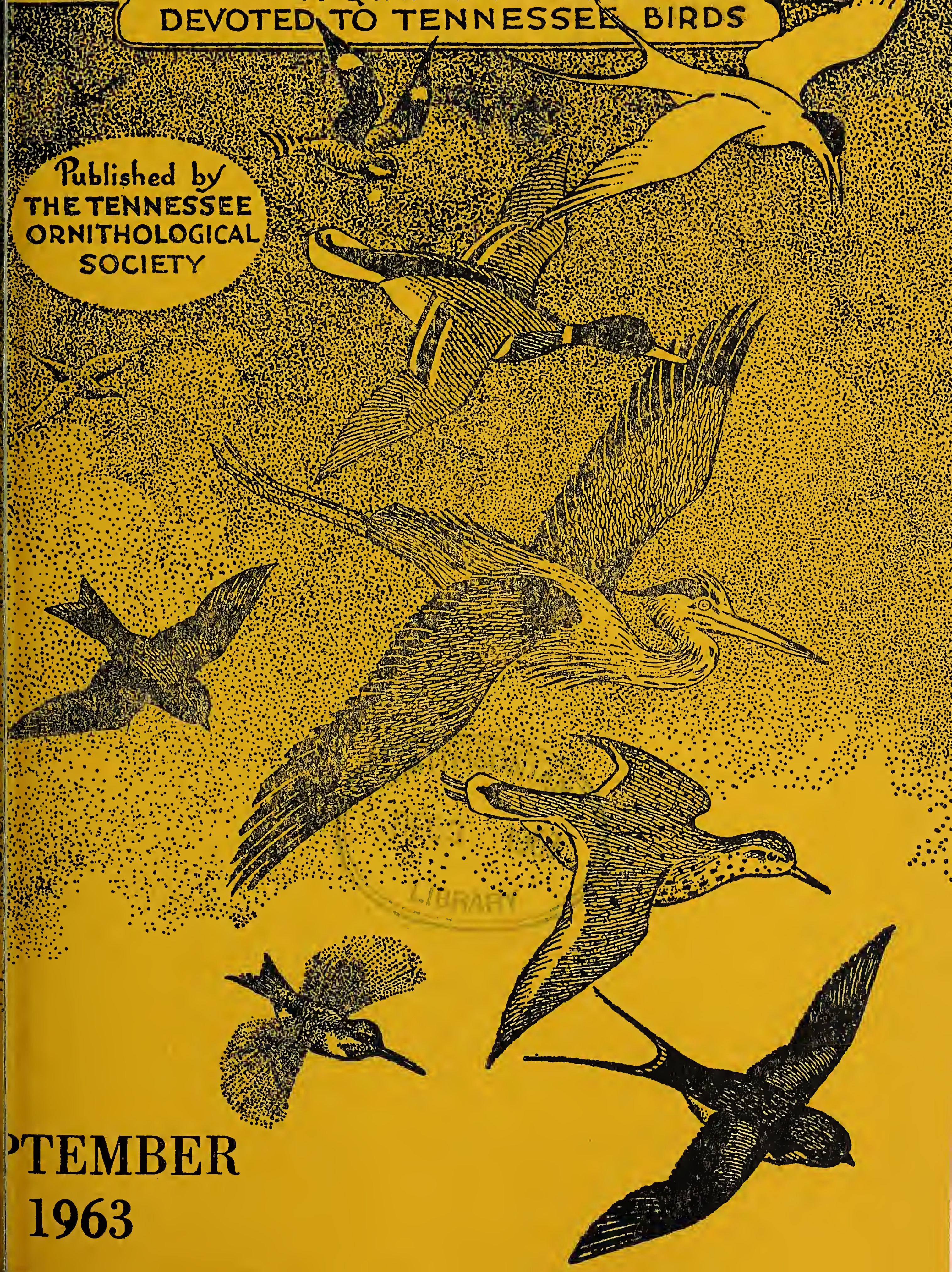

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VOL. 34 SEPTEMBER 1963 NO. 3

## A NESTING STUDY OF THE EASTERN PHOEBE

By JOHN WALLACE COFFEY

On the morning of 26 May, 1962, I was observing birds along Steels Creek near Bristol, Tennessee with several members of our TOS chapter, when we discovered an active nest of the Eastern Phoebe *(Sayornis phoebe)* From this nest, located under a large concrete bridge, I banded my first young Phoebe.

I don't suppose anyone forgets an occasion when you struggle most of the day trying to kill or remove the countless crawling mites that swarm over your hands, arms, and clothing. Certainly, it is not the most enjoyable experience to have come in contact with such an infested nest. Nevertheless, I managed to salvage one young bird for banding. The remaining four flew in all directions before bands could be placed on them.

That is the story of my first nest. The rest of the story might well be found in Dorthy Bordner's article for **EBBA NEWS**, November-December 1961. From that article entitled, "Phoebe Banding in Pennsylvania", I borrow her summary in a nutshell: she writes, "This article might be called a progress report on the project which grew as one bridge led to another."

Within the limits of this article, I intend to shed more light on the subject of Phoebes and their nests. From my study many interesting questions have arisen. Perhaps many of my findings should merit further investigation. In several phases of the study, conclusions differ with much contrast to the observations made in the Pennsylvania area (Bordner 1961).

The Phoebe, along with many other species, deserves much attention. The present problem of controlling our environment by spraying deadly chemicals, not only offers an increasing concern for all wildlife in general, but also presents further obstacles for the Phoebe's feeding habits. The placing of the Phoebe on the disaster list gives the ornithologist additional reason to be concerned with the future success of this small flycatcher.

Two important areas were selected for the focus point of my study. The first is thirteen miles of Tennessee Route 91 from the cross-roads in Shady Valley, Tennessee to Damascus, Virginia. The upper portion of this area is near Shady Valley. In the Spring of 1962, some of the area was sprayed for Japanese Beetles. Thus a good opportunity was presented to study the effects that might be evident in the 1963 nesting population. Flowing along this road, and throughout the area, is Beaver Dam stream. The stream falls approximately 800 feet in elevation from Johnson County at Shady Valley into Washington County, Virginia at Damascus. At this small town in the lower valley Beaver Dam joins Straight Branch, a similar winding mountain trout stream, flowing from the higher mountains of Washington County and forms the head waters of the South Holston River.

Straight Branch is the second important area. Like Beaver Dam, the average nesting elevation for fifteen locations is approximately 2,400 feet. Unlike the fourteen locations along Beaver Dam, it has not been sprayed and therefore establishes an excellent control area. U. S. highway 58 fol-

SMITHSONIAN

lows the 900 foot descent of this stream through the Jefferson National Forest and crosses the stream in many places to form fifteen bridges over a distance of three miles.

To establish a relationship between nesting at these higher elevations and the lower elevations, 37 nests were checked between 1500 and 2000 feet and four nests at 1200 feet. Some of these nest sites were located up to 25 miles away. Most of the nests from lower elevations were located around Bristol, and in Sullivan County, Tennessee and Washington County, Virginia.

Locating the Phoebe's nest is not as difficult a task as one might think. The first step is to determine from maps or memory, those areas which provide well constructed bridges and culverts. These areas are frequently associated with rather large streams, because the smaller creeks often flow through pipes or under poorly constructed wooden bridges. Neither pipes nor small wooden bridges have proven to be choice locations for nesting.

Particular attention is given to the culvert-bridge locations because they are readily located and easily accessible. In addition, they are most plentiful throughout this area. This is particularly true of the Beaver Dam and Straight Branch nesting areas. Considerable effort was given to finding nests on cabins, cliffs, dirt banks, and large rocks. However, these locations yielded only about 11.5% of the total nests discovered. Streams flowing along highways and roads through forests or heavily wooded areas invariably produce many suitable nesting places.

Open country and farming areas are not to be neglected. Such areas frequently maintain a rather dense population. We should note that farming country supplies the Phoebe with nesting materials, parasites, and nesting competition which are not frequently encountered at higher elevations in mountains or wooded areas. These subjects shall be discussed in greater detail in other portions of this report.

Records were kept in a small loose-leaf notebook, while in the field, and banding information recorded on forms carried on a clip-board. The notebook served to record information concerning a description of the location, nest construction, sampling of air and water temperatures, parasitic conditions, observations and description of nestlings, eggs, egglaying, incubation, and several other important aspects of the study.

Later, all significant information that might have been useful on return visits to the nest was placed on a 4x6 inch blue file card and the location was given a number. The number, such as 162-03, indicated from the first three digits the location, and from the last two the number of nestings or broods studied at that location. If three nests had been located at a particular culvert, each nest would be recorded on a separate card. Each card would bear the same location number (162-) and a separate brood index such as 01, 02, or 03. Upon returning to the field, a quick glance at the card gave the history of the nest and its location as well as some indication of what to expect in terms of young, eggs, and nest construction. Elevation for each nest was determined from U. S. Geological Survey contour maps and was recorded in red at the top of each card.

Since most of the nesting locations were either under culverts or bridges, a system was devised to describe the exact location. This allowed for the possibility of describing several nests in the same location and to make reference to a new nest, an old nest of the same season, or a nest still intact from the season of the previous year.

When standing upstream at the opening of a culvert or the upper end of a small bridge, it is possible to describe the nest in terms of the left or right wall of the culvert. A nest can further be described as having been found on the upper or lower end of the culvert and its location from the nearest end is expressed in a measurement of feet. In many places the culvert has two or more channels through which the water flows in which case reference was made by numbering the channels from left to right.

The final tabulation of these factors showed only a slight deviation from what could be expected based on probability. The Phoebe has two alternatives: a nest can be placed on the left or right wall and either upstream or downstream. Very few nests were actually placed in the center. Probability would expect 50% on either wall and the same for the upstream-downstream location. The left wall was chosen for 62% of the nests and the upstream tendancy was 58.5%. Four other combinations can be determined from either an upstream left or right wall, and a downstream left or right wall. Considering this combination, 25% would be the expected probability, in each of the four possibilities. The upper left wall was high with a 34.5%, followed by 23.6, 21.9, and 20.0 respectively. The lower right wall supported the fewest number of nests having eleven.

The actual significance of the percentages is very limited. They are recorded mostly as a matter of record because at many nesting locations, it is possible to relate many other determining factors.

It was found, for example, that in winding mountain streams erosion had caused the main flow of the water under bridges and culverts to run constantly toward the lower wall. Many times this was in direct relationship to the direction from which the water was flowing just before entering the culvert. In nearly all situations of this nature, the Phoebe chose the side where the deepest, or main, channel of the water was flowing. As the stream snaked back and forth under the roadway, the water alternated from the left wall to the right wall with every other culvert. This gave the nest an increased protection from being reached by predators.

While the location of the nest in relation to the upper end and lower end of the culvert most likely depended more on a simple choice of either one end or the other, it was discovered that in most situations, I encountered Phoebes facing the nearest end during incubation or brooding. The nest requires the bird to face in one or the other directions because the presence of the wall on which the nest is constructed limits any other position. Nests were often located within a foot of the opening to the culvert. The average for 37 nests was approximately seven feet from the end. However, in one instance, a nest was found 25 feet from the nearest end of a long culvert under a super-highway.

The method of support used in construction of a nest varies somewhat. Most of the nests were simply plastered to the wall at the nesting site. Only 29 of the 75 nests for which the method of support or attachment was recorded had partial support from a ledge, rock, pieces of metal used in concrete reinforcement, or a shelf upon which the nest was completely supported. Complete shelf support was found at 20 nests; most of these nests were under bridges which had I-beams that were convenient for the support of a nest.

The materials used in construction of the nest were constant in all respects except for the lining. Generally, the nest is constructed of mud and covered with green moss. The moss is probably replaced during the season because nests that were used over a period of two months and raised more than one brood still maintained a green outer cover. The lining differs with location and availability of materials. For instance, it was always noted that in wooded and mountainous areas the nests were lined with dried grass. On the other hand, nests located in farming country were lined with horse hair.

**Nest and young Eastern Phoebes under bridge.**
**Photo by George Craig.**

Invariably, nests were placed under some type of overhead shelter. Usually, the roof of the culvert served as the shelter and the nest was placed within two inches of the ceiling, if possible. The nest is approximately five to six inches in diameter and four to seven inches in depth. The interior of the nest is a shallow cup. Because the weight of the brood is so great, the outer rim falls until the nest is nearly flat. This proves to be a very efficient way to determine if a brood has been raised at a nest during the present season.

Nests will remain intact for at least two seasons if they are well constructed and not destroyed by man or high waters. In some cases, nests have been built so well that they are used again during the following years. In other places they would tear loose from the surface if lightly touched, or dampened by moisture from a leaky shelter.

In many of the locations it was observed that a great deal of mud or muddy water had been splattered over the roof and surrounding walls. This may have been caused by hovering in flight while constructing the nest. The traces of mud served as clues to spots where construction was either being attempted or where a nest had been built and destroyed.

Temperatures surrounding the nesting locality play an important role in the incubation of a cluch and the raising of nestlings. The young bird is always "cold-blooded" (poikilothermic) which means that its body temperature corresponds to the surrounding air temperature (Pettingil 1956). We shall see the importance of this factor within a few paragraphs.

Air and water temperatures were taken periodically during field work. Temperatures were determined at various elevations and locations. A standard thermometer used for taking air temperatures and a floating dairy thermometer were used to record the temperatures. All readings were expressed in degrees based on the Fahrenheit scale. Additional information and double-checks of recorded data have been furnished by the U. S. Weather Bureau Local Climatological Data Reports for Bristol, Tennessee.

At higher elevations, the water temperature influences air temperature. The water falls several hundred to a thousand feet within three miles and is colder than the air temperature due to the swift current and relative slow rate of temperature pick up from the atmosphere due to the much greater density of the water. Frequently, the air temperature is well above 70 degrees and the water 20 to 30 degrees cooler. At lower elevations the water generally runs much slower and is practically the same temperature as the air. During cold nights, especially early in the spring, the air about the nest gets heat from the concrete of the culvert and the warm water.

There have been only two parasites found in relationship to the Phoebes in my study. The first is that of the Brown-headed Cowbird, *(Molothrus ater)* and the second being mites.

Parasitism by the Cowbird was recorded in only one of the 78 nests that were studied during the two years of the project. In Pennsylvania, 4.3% of the 132 nests located during a three year period from 1959 to 1961, were parasitized (Bordner 1961). The one nest that I discovered was under a small bridge at 1600 feet elevation on 10 May, 1963. It contained only one bird and the remains of broken Phoebe eggs were found on the floor beneath the nest. The Phoebes were observed while feeding the bird. It was banded and replaced in the nest. In another study the author claims to have removed all eggs and young of the Cowbird. This practice was not carried out in my study due to the fact that it tends to interfere with the natural occurrence of necessary functions in nature.

I have heard people say that it is not wise to encourage Phoebes to nest near the home. Mites which infest the nests are the reason for this belief. This cannot be supported by evidence supplied by 78 nests for only three nests were found to contain mites. All were in farming country and my belief is that mites are rarely found in heavily wooded areas due to the lack of domestic animals.

On two occasions, a young bird, which had been removed from the nest for banding, was nearly dead after just a few moments of gentle handling. Both appeared to be either dying or exhausted and were breathing very rapidly. Their nests were heavily infested with mites.

As early as 23 March, 1963, several Phoebes had returned to the Shady Valley area. They were first noted at elevations between 2140 and 2600 feet. One bird sang continuously and flew under a bridge that contained a nest used in 1962. This was the first active nest discovered in the Beaver Dam nesting area. The first eggs of the season appeared at this nest around 1 June.

Along Straight Branch, the first active nest was found on 5 May, and contained young birds. By 28 May, this area had 12 active nests. The height of the nesting season in the Straight Branch vicinity was determined by 15 June. This area was not checked during the early months of 1962 and; therefore, no comparison with that year could be made.

The Beaver Dam area is probably close to its 1962 schedule because in that year three nests were active by 9 June and the peak of the nesting season came between 23 June and 5 July when all nests were active. At that time, Straight Branch yielded only two active nests, probably late second broods. There was strong evidence to indicate that more than 17 nests had been used during the 1962 season along Straight Branch.

There is no reason to believe that Straight Branch had more nests in 1963 than in 1962. All locations which were used in 1962 were used again in the 1963 season. No new ones were established to the best of my knowledge. Considering the fact that there were just as many nests during this season, the nesting was most fruitful because Straight Branch produced 19 nests at 15 locations. Straight Branch has had only one more active location than Beaver Dam, that is 15 and 14 respectively. However, the 1963 production at Straight Branch saw the totals for that area rise 58% over Beaver Dam in active nests, 63.5% in eggs laid, and 57.5% more young hatched. Meanwhile, the production along Beaver Dam fell from the 1962 rate to only 66% of the number of active nests which it had the previous season. Egg production was down 37%, unhatched eggs were up 60%, and the number of young birds hatched was down 43.5%.

Spraying for Japanese Beetles in the Spring of 1962 forced the Tennessee Game and Fish Commission to close the stream to public fishing. It must be stressed that no eggs were taken from this area to be checked for traces of chemicals used in spraying. No Phoebes were found dead or dying. It would be foolish to think, however, that the nesting population was not influenced by the spraying. Spraying with insecticides would probably decrease the amount of available food.

Generally, the nesting at lower elevations, below 2000 feet, are several weeks ahead of the Straight Branch and Beaver Dam areas. Between 1500 and 1800 feet the first active nest was discovered on 11 April, 1963. Ten active nests were located between 1 May and 10 May, and additional 16 nests were included in the growing population. On 10 May several nests were checked at 1200 feet near Kingsport, Tennessee. A few had been active and one or two others contained young large enough to fly. Two nests contained young birds and one nest had eggs.

Earlier in the study, I had intended to establish some pattern as to the raising of a second brood. It was believed that a Phoebe would defend a given territory throughout the season and thus raise a second brood at the same nest, or at least the same location. Many new discoveries led me to become cautious in describing any pattern that might hold true in most cases. Multiple nestings at the same locations left many unanswered questions that could only be solved by color banding or banding and trapping a nesting pair several times. Are Phoebes monogamous? Do the same pair remain mated for both broods, if two broods are raised? How does overlapping of nesting activities enter the picture?

It was observed that in a few locations a second clutch was being incubated within 15 to 20 days after the first brood left the nest. In one case, the nest used for the second brood was constructed at the same location as the first nest and was built while the first brood was still in the nest. At another location, the second nest was constructed and eggs laid within a period of 25 days. Did one or two birds build this nest? How were the young cared for during this period? Had they been killed or become lost? Could a second pair have captured the territory during this time? Could this be a second mate by the first male, or vice-versa?

In some cases more than a month passes before any nests are constructed or eggs laid for the second brood. This occurs at the lower elevations where the first brood is raised early in the season. The second broods are in the nest during the first weeks of July. At higher elevations it is necessary for a second brood to occur soon after the first or not at all. Here the season is much shorter than at lower elevations. Likewise, nesting is completed by the third week in July.

The quick second broods are probably accounted for by overlapping of the nesting activity. The male cares for the young while the female is beginning a new nest. In this case, there is little or no loss of time in breeding activity. I lend support to this by observing a Phoebe building a nest at one location and feeding young at a second location about 100 feet apart. Further investigation might prove this to be a dummy nest or roosting nest until a second brood is started. In one case two nests were constructed within a week or two of one another and the second nest was later used to raise the second brood. It was found that both members of a pair were constantly found near the nest during incubation of the first clutch. However, rarely could a second bird be found when a second clutch was being incubated.

Egg laying is begun soon after the nest is completed. In three instances nest construction was accomplished in less than 15 days. The clutch was begun with one egg being laid each day and incubation began with the first egg. Incubation was carried out during the night and morning hours. On cold or damp days it was noted that incubation continued into the afternoon.

Most clutches in the first laying were five eggs and sometimes were four. Of the 70 nests in which eggs were observed, only one nest contained six eggs and one of these did not hatch. It was fertile. Embryonic development had ceased after several days of incubation.

Incubation usually takes 16 to 20 days. Bordner (1961) shows that the incubation period for the Phoebes in her studies was approximately 15 to 17 days. The eggs hatch over a span of several days causing the young to be very different in size for the first few days. If an egg does not hatch, it is sometimes pushed from the nest, but in most cases it is left in the nest. One nest containing the second clutch of the season, had a new lining built into the nest floor in order to partially cover an unhatched egg remaining from the first clutch.

A nest containing eggs was completely destroyed at one location. By the fourteenth day after the destroyed nest was discovered, a new clutch was begun. The second nest was rebuilt in the same spot as the first.

Bordner (1961) pointed out that Phoebe eggs have a pinkish tinge when newly laid and become chalk white with incubation. This served as a valuable aid in determining the age of a clutch.

A record was kept to establish the extent to which eggs were blotched or spotted with brown. Results of the study show that only 30% of the nests contain marked eggs. From a sampling of 148 eggs, 12% were either speckled with fine brown spots or were heavily marked about the large end with large spots.

It was found that a person could approach an incubating bird very closely. The Phoebe's tendency to sit tight became increased with several days of incubation and reached its peak with young birds being brooded. Frequently, one could almost touch the bird before it would drop from the nest and fly low above the floor or water before reaching a perch.

Phoebes were very passive when a clutch of eggs were being investigated by an intruder. With young birds in the nest it became a different question. Excited birds would flit from one perch to another while snapping their bills and sounding a loud chirp accompanied by the downward thrust of the tail. If I went to a nest alone, they would fly at me. On two visits, I was driven from the nest. If I was accompanied by another person they would not fly at us. Usually the Phoebe was quieter if a mate was not present. If two birds were at the nest the fluttering and chirping became so intense that they would fly at one another.

A brood of young Phoebes can be banded anytime after they are three or four days of age. The smallest bird from the 154 banded during 1962 and 1963 measured; tarsus—12mm., wing—12mm., tail—00mm., and bill—8mm. The largest measured; tarsus—21mm., wing—65mm., tail—37mm., and bill—10mm.

Investigation in the State College area of Pennsylvania (Bordner, 1961) revealed that between 6 July, and 17 July, 1961, 41 nestlings from ten nests were lost and 35 from eight nests were known to be dead. It was thought that unseasonable temperatures may have directly or indirectly (through the insect supply) contributed to the deaths. From 5 July to 11 July, night temperatures fell into the 40's.

In the Bristol area at an elevation of 1540 feet a nest with young survived three days when the temperature dropped to 37 degrees, and one day each with temperatures as low as 35 to 30 degrees. Between 1 May and 9 May, 1963, I saw seven nests that contained young birds and endured 37 hours of 40 to 49 degree temperatures and 14 hours of 30 to 39 degrees. All young were accounted for and none was found dead.

Young birds remain in the nest for a period of 15 days, at which time they leave the nest at different intervals unless suddenly frightened by an intruder. During their stay in the nest they are fed by both parents—at least during the first brood. At each feeding the droppings from the young birds are removed from the nest and dropped to the floor beneath along with the egg shells from the clutch. Accumulations of waste material beneath the nest is a good clue to a previously active nest. Within a matter of weeks the droppings undergo decay and are no longer easy to detect.

Phoebes are well developed when they leave the nest and can fly immediately upon leaving the nest. I have watched several birds fly from the nest for the first time and they usually fly from 25 to 50 feet before landing. Within a matter of minutes, they are fully capable of gaining altitude and landing on a perch such as a power line or branch.

Further investigation of young birds, after they have left the nest, has never been followed up due to the fact that I have never located any. All of my experiences involve birds that escaped as I approached the nest.

The competition among Phoebes for a nesting territory is rather limited in most areas. Almost any habitat has several available locations that meet the requirements of this species. In areas where the population density reaches saturation, competition should be more intense.

At the lower elevations the nesting areas are not as well defined as in the narrow valleys of the mountainous regions. Competition in this area is probably very slight. At the lower elevations and especially in open farming areas at most elevations, the Phoebe must contend with two other species that frequent culverts and bridges.

The Barn Swallow *(Hirundo rustica)* is a common culvert nesting bird. It is not at all unusual to observe several active nests of this species in the same location. However, only once have I found an active nest of both the Phoebe and Barn Swallow in the same location. Both nests contained eggs with the Barn Swallow's being the more recently constructed. The Phoebe's nest was deserted. Several nests of the Phoebe's have been relined with feathers and occupied by Barn Swallows.

The second intruder in Phoebe territory is the House Sparrow *(Passer domesticus).* This species has been found using both the nests of the Phoebe and Barn Swallow but is not expected to be a serious competitor with the Phoebe in any locality.

### ACKNOWLEDGMENTS

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## THE SEASON

MEMPHIS.—Golden Plovers, 580 (400, one flock) usual Crittenden County, Ark. circuit, 17 Mar.; 717 (350, one flock), Lakeview-Lake Cormorant, Miss., same date. 23 Mar., the Delta: Clayton, 10; Lula, 10; Friar's Point area, 100; Glen Allan, 53; W. of Rolling Fork, 85. At the Tupelo Fish Hatchery, 12 May, 4 Semipalmated Plover, 1 White-rumped, 14 Least, and 9 Semipalmated Sandpiper; 85 of the latter species, 25 May, Lakeside (E. of Midway Corner), Crittenden County, Ark., plus 13 Semipalmated Plover and other species; 20 Semipalmated Sandpiper at Lonoke (with 2 Least) 29 May. Among late summer returnees in Arkansas, the uncommon Stilt Sandpiper, — one, 21 July, NE of Marion, and 14 Sept., Clarkdale; 5 W. of Waldenburg, 28 July.

Landbird migration sampled infrequently and apparently unnoteworthy. However, unsettled weather near the end of May had transients lingering at Coffey Grounds. I had a Chestnut-sided and 3 Magnolia Warblers the eve. of 26 May and one Magnoia early, 29 May; others later than average at Overton Park, 24-26 May, including a Gray-cheeked Thrush, 26 May. We left town 29 May, missing a chance to check further. Mrs. Coffey had a Mourning Warbler there, 21 May. The Memphis Chapter field day at Shelby Forest S. P., 28 April, listed 85 species plus 2 others enroute. Mrs. Coffey and I were rained out, to some extent, at Paris Landing, the same date, listing 2 Forester's Terns, a Bank Swallow, and a Northern Waterthrush, among others. On 22 May, Mrs. Coffey and Helen Dinkelspiel found 88 male and 245 female Bobolinks, Lakeview, Miss-Tenn. At dusk, 21 April a flock of 95 Dickcissels on the ground plus 10 singers, noted at county line N. of Turrell, Ark.

Observations at Norfolk Dam, Ark., by Lefty Harvey (4-9-61, 4-5-62) and by Dwight Partee this spring sets an arrival date for Cliff Swallows of about 2 April (5 on 4-2-63), in line with the Counce, Tenn.-Miss. area (1954-60). Latest were 45 at Lakeview, Miss.-Tenn. 22 May (LC-HD), along with 75 and 220 Banks. At our Penal Farm 4 Cliffs were seen 14 July (BC). On 21 July, NE of Marion, Ark. (BC, LC, Alice Smith) swallows were Bank 20, Tree 13, and Purple Martin 550 (about one-fourth adult males).

Oliver Irwin reported a total of 200 Black Terns off Mud Island, 13 Aug. and 20 on 14 Aug. off Hopefield Point, (Ark.), in front of Memphis. At Mud Island he noted 100 Common Nighthawks 29 Aug. and 38 on 4 Sept. On 15 Sept. he watched an immature Franklin Gull at the island tip.

SW of Covington, Tenn. Alice Smith heard a House Wren singing, on one occasion only, 19 June. We failed to find the species on the Reelfoot spring trip, even at sites of the past two summers. On 21, July 2 Lark Sparrows and a male Blue Grosbeak were opposite north center of Penal Farm (LC, BC).

BEN B. COFFEY, JR., 672 N. Belvedere, Memphis 7, Tenn.

NASHVILLE.—Our coldest winter in many years ended with no reports of either Evening Grosbeaks or Red-breasted Nuthatches, and only one for Tree Sparrows, a single bird on our Christmas Count. We expected to have both a late spring and a late migration, but were pleasantly surprised when winter ended suddenly and by 1 April spring was developing normally. Our earliest spring records were: a Hummingbird 4 April (CWF), one Tree and two Barn Swallows at Bush Lake 18 March (HEP), two Purple Martins were there 14 March (HEP) which ties our earliest record, and a Kentucky Warbler 9 April (SB). Either second earliest or ties, are the following: a Purple Gallinue (4th Nashville record) was at Buena Vista bottoms 18 April (JP). A Whip-poor-will was calling at Pegram Station 29 March (Dr. John Flexner), one Worm-eating Warbler 14 April (KAG), single Nashville Warblers by KAG and HCM on 18 April (ties older records), a Blackburnian on 18 April (ARL), one Yellow-throated Warbler on 24 March (HEP), Chestnut-sided Warbler 22 April (KAG), and a Chat 14 April (KAG). Earlier than our usual arrival dates were: a Green Heron 30 March (SB), a Common Egret on 13 April (LOT), one Nighthawk 18 April (HCM), an Acadian Flycatcher 19 April (KAG), Swainson's Thrush 18 April (SB), a Warbling Vireo 10 April (HCM), one Blue-winged Warbler 10 April (LOT), a Prairie Warbler 9 April (SB), Palm Warbler on 30 March (SB), a Northern Waterthrush 10 April (LOT), Yellowthroat 14 April (KAG), two flocks of 8 Bobolink on 27 April (AFG & GRM, Jr.), Rose-breasted Grosbeak 18 April (HEP), two Chipping Sparrows 5 March (BHA), and a Lark Sparrow 15 April (HCM).

Spring migration did not bring any unusual waves, but did extend long enough to produce many late records. New latest ever spring records are: Canada Geese 11 May (1), 16 May (2), and 23 May (1), all at Coleman's Lake (LOT). One Gadwall was there 28 May and 1 June (LOT). One Spotted Sandpiper was still at Bush Lake 31 May (HEP). Our first June records for Least Sandpipers were one 3 June at Old Hickory Lake and three 10 June at Coleman's Lake (LOT).

Two Herring Gulls on Old Hickory Lake 14 May tie our latest record (LOT). For late warblers see THE MIGRANT **34:** 37&38. A Magnolia 3 June was the first records for that month (HCM). Second latest spring departures, or ties, were: eleven American Widgeon on Coleman's Lake 11 May (LOT), a solitary there 23 May (LOT), seven Bonaparte's Gulls 26 April on Old Hickory Lake (LOT), one Swainson's Thrush 28 May (SB), two Gray-cheeked Thrushes 26 May (HCM), a Connecticut Warbler 25 May (KAG), and a Wilson Warbler 26 May (HCM). Later than usual were: a Common Loon and a Lesser Scaup, (see THE MIGRANT **34:** 36&37), three Semipalmated Sandpiper at Coleman's Lake 28 May (LOT), a Ruby-crowned Kinglet 7 May (HCM), a Solitary Vireo 18 May (HCM), a Mourning Warbler 28 May (ARL), three Rose-breasted Grosbeaks 19 May (HEP). Not late, but unusual was our largest flock ever of Ruddy Ducks, 32 on Bush's Lake 17 April (HEP).

Summer weather was pleasant and far greener than usual. Our only really hot days were a week in early August. Unusual summer records were: five Yellow-crowned Night Herons at Buena Vista bottoms from 18 April (JP) to late July. No young were seen. One American Bittern at Buena Vista 24 July (JP) was our second July record. One to three Coot were at the same place on Old Hickory Lake during June, July and to 8 August (LOT). Four Black-bellied Plover were at Bush farm on the morning of 29 August after a 5.35 inch rain (HEP) and one was found near the dam on Old Hickory Lake on 14 September (LOT). Our first summer Gulls were Ring-billed, with 2 to 4 during June, then 2 July (2), 11 July (1) and 23 July (1) all at one point on Old Hickory Lake (LOT). A Forster's Tern on Old Hickory Lake 15 June (LOT) was a second June record and one at Bush 5 August was the first record for that month. There were 3 Caspian Terns 16 June, (see THE MIGRANT **34:** 37), and 3 on 30 August at Bush's Lake (LOT & HEP). Black Terns were back after missing a year with one 31 May, two 24 June, and two 30 July at Bush's Lake (HEP). Each summer for several years we have had one nesting record for the House Wren. This year's record was a nest at the Hite home (**fide** ARL). A Black-throated Green Warbler was at the home of HCM 18 June for our second record of that month. Our first active Blue Grosbeak nest, was recorded 30 June, (KAG). One Lark Sparrow was at Bush's Lake 26 August (HEP). Perhaps our most unusual summer record was one of Hummingbirds feeding young in a nest at Fernvale 1 Sept. (JOE et al). There seem to be no earliest ever records for fall arrivals. Second earliest, or ties, are as follows: a Yellow-bellied Flycatcher banded 30 August (KAG), a Northern Waterthrush the same day (KAG), a Canada Warbler collected 17 August (JCO). Earlier than usual were the following: two Spotted Sandpipers at Bush's Lake 16 July (HEP), five Least Sandpipers 23 July at Coleman's Lake (LOT), a Traill's Flycatcher banded 8 Sept. (KAG). A Swainson's Thrush 1 Sept. and a Gray-checked Thrush 8 Sept. were banded at Two Jays (KAG). A Golden-winged Warbler was seen 1 Sept. (CWF). One Chestnut-sided Warbler was banded 1 Sept. (KAG). A Wilson's Warbler was bathing at the home of Mrs. Kirby Stringer 1 Sept.

A fairly late date for the Purple Martin was one on 29 August (HCM).

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HENRY E. PARMER, 3800 Richland Ave., Nashville 5, Tennessee.

COLUMBIA.—Notable finds on our spring field day, 1 and 2 May, included 2 Ruddy Ducks, 1 Sora Rail, 1 American Bittern, and 2 Upland Plover. One migrating Lark Sparrow was identified by GRM on a subdivision lawn while driving to work 29 April. So far as I know there is no other record of this bird in the Columbia area in recent years. For that matter no Red-headed Woodpecker has been sighted in this area in the last 3 years and the only 2 such birds I have seen below the Cumberland Plateau were found in early morning on the Nashville Spring Field Day at Mr. Ganier's camp on Stones River in April 1961.

Barn Owls reared young in Dr. Gray's large, wooded front yard and were present from April until August. Great Horned Owls fed young and probably nested in large Beech trees in Dr. Fuqua's yard, but were only observed in late April and early May. Barred Owls and Gt. Horned Owls called sporadically all spring and summer behind our house, sometimes just outside our window along with occasional Screech Owls, so each of our active birding families lives in good habitat for the larger owls.

Cattle Egrets again visited Columbia on just one day about 10 May (somehow I failed to record exact day). They were seen on the Wick Halliday farm, 3 miles South of Columbia by the Hallidays and by Dr. Tom Young (their neighbor) both of whom described 7 similar small white herons with blush of pink which spent the day in an open pasture frequently walking meticulously beneath the cattle well away from ponds or water. Unfortunately toward evening these birds rose and flew away without returning before any of our regular birders knew about them. This is within the same week as our previous single sighting in May 1962 by Mary Lucy Fuqua and the two sightings are within ½ miles of each other.

Horned Larks were again seen off and on all summer at Lawrenceburg and Mt. Pleasant airports. Yellow-crowned Night Herons apparently again reared young at Arrow Lake as several adult and immature birds are present now and mature birds were present late in the spring. Among the more common shorebirds a Sanderling was identified by GRM and Cleo M. on 1 and 7 September. Two Ospreys were present at the lake 15 September. An estimated 25-30 Hummingbirds have gathered again this fall in the marsh at Arrow Lake to feed on a large bed of Touch-me-not flowers.

GEORGE R. MAYFIELD, JR., Maury County Hospital, Columbia, Tenn.

KNOXVILLE.—Red-headed Woodpeckers, which sometimes do and sometimes do not spend the winter in this area, did so this past winter, and a pair nested on the University campus. Red-breasted Nuthatches were very scarce or absent all winter, and the only report of one during the winter and spring migration was by James Campbell who saw one on Sharp's Ridge on 20 April.

Several migrant warblers were observed unusually late. On 25 May Joseph Howell saw Black-throated Blue, Chestnut-sided, Connecticut (two), and Canada Warblers. James Campbell reported the following warblers: Black-throated Green on 26 May, Cape May and Magnolia on 30 May. Joseph Howell found a singing Blackburnian on 1 June.

A Pied-billed Grebe with at least one very small young was seen by Nancy and James Campbell on Cardwell's Lake on 20 April. Another unusual nesting record is that of a Scarlet Tanager; a female was observed sitting on a nest on the University Farm on 5 June. On 11 July in the same general area a female Scarlet Tanager was caught in a mist net and banded.

Martha Moore, John Cheek, and Samuel Tipton banded a number of birds this summer on the University Farm, trapping them in mist nets. Two birds caught on 2 July were probably very early migrants or more likely were wanderers from the mountains; they were an immature Chestnut-sided Warbler and a female Rose-breasted Grosbeak. A few days after this I saw a male Rose-breasted Grosbeak at my home.

From early August to the middle of the month several Common Egrets and immature Little Blue Herons were observed around the new Melton Hill Reservoir, near Oak Ridge. This is a new location for these birds. An immature Yellow-crowned Night Heron was seen by James Campbell and others in north Knoxville on 3 Sept.

In early September flocks of Grackles and Starlings were commonly seen in the countryside and their regular flight lines indicate that roosting areas were already established.

JAMES T. TANNER, Department of Zoology, University of Tennessee, Knoxville.

ELIZABETHTON.—An unusual occurance of a Double-crested Cormorant was observed on Boone Lake 31 Mar., while the last Horned Grebes (2) of the season were noted 24 Mar. and single scattered Pied-billed Grebes were recorded to 12 May. The last Great Blue Herons were noted with two present on 31 Mar. and were again identified in the area on 21 July when one was found in the Roan Creek area. Common Egrets were scarce with none being recorded at the Roan Creek area this summer. The records we have are 28 July (3) and 4 Aug. (1) at the Watauga River Prong of Boone Lake; 27 June (1) near the Bemberg Filter Plant on the Watauga River; and 3 July (4) on the Doe River in the center of Elizabethton. A Yellow-crowned Night Heron was noted in the same location as last year at the "Morrell Hole" in the Watauga River from 26 July to 17 Aug. (ED). The first Green Herons were noted on 16 April.

The Blue Goose that spent the winter in Johnson City was last recorded on 31 March. A few scattered Mallards were observed to 28 Apr. and again 8 June (see THE MIGRANT 34: 37, 1963), while the last Black Ducks (4) were noted on 24 March. American Widgeon (2) were noted to 14 Apr. and with one unusual record 8 June (see THE MIGRANT 34: 37, 1963). Pintails are uncommon here anytime with two present on 17 March. The same also applys to Blue-winged Teal with the first noted on 21 March (2) and a total of six found on the Spring Count on 28 April. Two Redheads were present 24 March while the last Ring-necked Ducks (7) were here to 31 March. The largest number of Lesser Scaup (175) were found on 24 Mar. and then dropped to only a few individuals with the last birds (2) recorded on 28 April. The last Common Goldeneyes (3) were found on 24 Mar. with an unusual record of one female present on Wilbur Lake 12 June (see THE MIGRANT 34: 37, 1963). Bufflehead (41) were present in good numbers on Wilbur Lake on 24 Mar. and with 14 still present on 23 April. The last Hooded Mergansers (4) of the season were found on 16 April and also an unusual record of two on 4 June at Roan Creek (see THE MIGRANT 34: 37, 1963).

The Red-shouldered Hawk that had been found in Shady Valley last year was observed in the same area again this year on 28 April. On 12 May two individuals and a nest in a pine tree were located. A ladder found leaning on the tree was mute evidence as to the fate of this pair and their nest, because the birds were not found again. The Broad-winged Hawk appears to be our most common summer hawk and then seems to be restricted mostly in the area of Shady Valley. Two records of the Marsh Hawk were noted on migration with single birds on 14 and 19 March. The Osprey was noted with single birds on 14 and 19 April and two on the Spring Count 28 April. An unusual record was of one on 28 July (KHD) and then the next one on 15 September.

The Ring-necked Pheasant is usually recorded each trip to Shady Valley but no definite evidence of reproduction, that we know of, has ever been recorded.

The first local record of the Ruddy Turnstone was established by K. H. Dubke for our area when a single bird was identified at close range feeding on the mud flats of the Roan Creek area at Watauga Lake 7 September. On 8 Sept., Dubke accompanied by Fred Behrend, against located the Turnstone at the same place.

An unusual record of the secretive Woodcock was noted on 2 June in Shady Valley and the last Common Snipe were seven found on 28 April. Spotted Sandpipers (2) were first reported 21 Apr. and with a few records the remainder of the summer (see THE MIGRANT **34:** 37, 1963). Solitary Sandpipers (1) were first noted on 7 Apr. and a few regularly with the last date in the spring on 19 May. The first fall record was of two on 4 August. Willets (27) were noted on Watauga Lake 28 Apr. (see THE MIGRANT **34:** 39, 1963). There were two records in the spring of Greater Yellowlegs 26 Mar. (1) and 21 Apr. (1) with also one bird present 4 June (see THE MIGRANT **34:** 37, 1963) and then 14 July (2) and 21 July (1) during the summer. Only one single Lesser Yellowlegs was noted in the spring on 19 May and two were recorded 14 July followed by these additional records: 31 Aug. (1), 1 Sept. (1), 7 Sept. (2), 8 Sept. (2), and 15 Sept. (2). No Pectoral Sandpipers were noted in the spring while the first fall records are of two on 21 July then none till the following dates: 18 Aug. (1), 25 Aug. (1), 31 Aug. (1), 1 Sept. (1), 7 Sept. (2) and 8 Sept. (2). Two Least Sandpipers were found on the Spring Count 28 Apr. and in addition these records: 12 May (1), 20 May (4), and 26 May (2). The fall records begin on 21 July (2), with the following additional observations: 28 July (1), 11 Aug. (3), 18 Aug. (8), 25 Aug. (4), 31 Aug. (5), 1 Sept. (1), 7 Sept. (1), and 15 Sept. (2).

The Dowitcher was recorded here for the second year in a row when three were found feeding 25 Aug. at the Roak Creek area of Watauga Lake. The Semipalmated Sandpiper was recorded twice in the spring 20 May (23) and 26 May (1). The fall records begin on 25 Aug. (6) and continued with these other sightings: 31 Aug. (2), 1 Sept. (2), 7 Sept. (5), 8 Sept. (5) and 15 Sept. (5). The Western Sandpiper was identified by K. H. Dubke at close range, in good light, and in comparison with Semipalmated Sandpipers feeding nearby, on the following dates: 7 Sept. (3) and 8 Sept. (4). The first East Tennessee record of the Buff-breasted Sandpiper was recorded this past season. For details see page 57 in this issue.

The last Herring Gull was recorded on 31 Mar. and the first for the fall was a single immature bird on 15 Sept. Ring-billed Gulls seemed to have reached peak numbers when 275 were recorded on 24 Mar. then dwindled rapidly with the last bird noted on 15 Apr.

Unusual records of three Common Terns and one Caspian Tern were observed at Roan Creek on 15 Sept. (KHD).

During the past summer Charlie Smith had the Chuck-wills-widow calling regularly at his home near Milligan College at 1600 feet elevation.

Mrs. Basil King recorded the Red-bellied Woodpecker regularly in her yard this past summer. There were also a few observations of the Red-headed Woodpecker during the summer. Both of these woodpeckers are rare in our area.

The Bobolink was again present in Shady Valley, but no nest was found. (See THE MIGRANT **34:** 17-19, 1963). Ed Davidson again recorded the Baltimore Oriole singing regularly in his yard at Hunter this summer, but did not find the nest as he did last year.

(Continued on page 63)

# NOTES ON COLOR PHASES OF SCREECH OWL

By AMELIA R. LASKEY

Dichromatism in the Screech Owl *(Otus asio)* is an interesting provocative subject for investigation. Early ornithologists realized that rufous and gray birds are of the same species and that the forms are not related to age, sex or season.

For 32 years (1931-1962), I have kept records of those that came to my attention, 98 individuals from middle Tennessee, mainly Nashville. There were 50 in rufous, 47 in gray (one of these was very dark with a few brownish feathers interspersed), and one in mixed rufous and gray plumage.

These records were collected in every month of the year. They included 54 birds that were banded and released, 39 casualties, most of them killed by automobiles, and 5 sight records, made in good light.

In the breeding season, March through September, there were 24 rufous birds; for the winter season, October through February, there were 26. Gray birds totaled 27 for the breeding season and 20 for the October-February season. The bird in mixed plumage was recorded in December.

More nestlings were found in gray than rufous plumage. Two broods of 3 each were all gray. One of these broods was hand-raised; all acquired gray plumage in the molt to first winter plumage. One brood of 2 had gray plumage. Another brood of 2, banded in the nest cavity with a gray adult, had one young of each color. There were two broods of 2 each in rufous plumage. One of these broods was hand-raised; the rufous color was much brighter on one than on its nestmate (4 Aug.). A bird with the gray fuzzy head of a chick had acquired new rufous body plumage on 1 Aug.

A gray individual occupied a bird house at my home for daytime roosting from mid-December, 1954 to 28 February 1955.

A. Stupka has records of plumage color for 104 of the 343 individuals that have come to his attention in 31 years (1931-1961) in Great Smoky Mountains National Park. Of these, 84 were rufous and 20 gray — a ratio of more than 4 red to one gray.

D. F. Owen has studied geographical trends in the color form of the Screech Owl. He based his conclusions on 1,778 specimens in collections of 15 museums and the published data by Schorger of highway casualties in Wisconsin and Illinois and that of Stupka (1953).

Owen summarizes his findings thus: "Throughout most of North America east of about 104° there are two forms of the Screech Owl: one with the plumage mainly bright rufous and the other with the plumage mainly gray. Birds of intermediate coloration also exist, but in most areas they are rare.

The relative frequency of rufous birds varies geographically in the form of a cline from north to south; about a quarter or less of the northern population is rufous, while in the south (Gulf coast and Florida excepted) up to three-quarters of the population may be rufous.

Screech Owls intermediate in coloration between gray and rufous comprise not more than ten percent of the population except in Florida and the adjacent Gulf coast where they comprise up to 40 percent. In Florida, Screech Owls are more variable in color and the population lacks the bimodality of other populations in eastern North America. This is probably the result of relaxed selective pressure.

The geography of polymorphism in the Screech Owl appears to be an unusual pattern of variation within an animal species."

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## BIRD MORTALITY NEAR GATLINBURG, SEPTEMBER 21-2, 1963

On the morning of 22 September, 1963, I was notified that a large number of dead birds had been found at the Ski-Lift terminal atop Mt. Harrison, 3¼ airline miles SW of Gatlinburg. Upon arrival, I found the birds to be generally distributed throughout the clearing in the vicinity of a shed containing the lift machinery. This clearing faces ENE, E, and ESE. The cables of the lift arrive from the east at the shed which is situated at the edge of the clearing. A bank of white lights had been on throughout the night. This bank is located near the edge of the clearing, about 15 feet off the ground and aligned more or less obliquely in the direction of the oncoming birds. The tree tops behind the lights (and the clearing) are at least 30 feet above the lights, which are about level with the roof of the shed. This configuration no doubt caused the confusion.

With the aid of several by-standers I gathered 144 birds, the majority of which were found on the level part of the clearing and on the south-facing slope. Others were found in the woods behind the shed. This wooded area slopes gently away from the clearing.

This collection of birds consisted of 30 species: Green Heron, 1; Black-billed Cuckoo, 1; Yellow-bellied Flycatcher, 1; Catbird, 3; Wood Thrush, 1; Swainson's Thrush, 24; Gray-cheeked Thrush, 10; Veery, 3; White-eyed Vireo, 1; Red-eyed Vireo, 4; Black and White Warbler, 2; Worm-eating Warbler, 6; Tennessee Warbler, 4; Magnolia Warbler, 4; Cape May Warbler, 1; Blackburnian Warbler, 6; Yellow-throated Warbler, 1; Chestnut-sided Warbler, 1; Prairie Warbler, 2; Ovenbird, 23; N. Waterthrush, 6; Kentucky Warbler, 8; Yellowthroat, 13; Yellow-breasted Chat, 1; Hooded Warbler, 3; Redstart, 4; Bobolink, 1; Scarlet Tanager, 6; Summer Tanager, 1; Indigo Bunting, 2. Warblers made up 59% (16 spp.) and Thrushes made up 27% (4 Spp.) of this series.

Noteworthy records for the park were: 1) Yellow-bellied Flycatcher . . . first park record; 2) Gray-cheeked Thrush . . . earliest autumn record; 3) Veery . . . equals previous latest record; 4) Worm-eating Warbler . . . latest autumn record; 5) Bobolink . . . first autumn record (Stupka, 1963, **Notes on the Birds of the Smokies**).

These birds made up a part of a migration which undoubtedly was moving in advance of a cold front. According to park records, a cold front moved into the Gatlinburg area during the 22nd, causing a change of 19 degrees in the minimum reading (58-39). LeConte recorded (7 a.m.) 50 to 38 (9:30 p.m.). The specimens have been deposited in the permanent collection of the Great Smoky Mountains National Park.

THOMAS SAVAGE, GSMNP, Gatlinburg.

# BUFF-BREASTED SANDPIPER NOTES AND A RECORD FOR EAST TENNESSEE

### By RALPH T. BULLARD, JR.

BUFF-BREASTED SANDPIPER *(Tryngites subruficollis)* records on the eastern edge of its migration route are extremely rare in Tennessee and almost non-existent in the states to the east. In comparing the spring and fall migrations of this bird, one finds that the spring migration is very sketchy (only a few records available) and is assumed to be up the Mississippi Valley. In contrast to this idea, Bent, (1934) page 75, states that "The fall migration is much more widely extended than the spring; the main flight is directly southward through the center of North America, but it is so spread out that some birds appear on both the Atlantic and Pacific coasts." North Carolina has only one record at Whitlock, Currituck County, 12 September, 1911 as described by Koble (**Auk**, Jan. 1921 page 108). It appears that three specimens were captured on the 12th and six others seen on a return trip to the same area 14 Sept. 1911. South Carolina's single record of the Buff-breasted Sandpiper was taken near Chaplin Village on St. Helena Island, Beaufort County by Walter Hoxie on 5 May, 1884. (Note: 1 spring, 1 fall record).

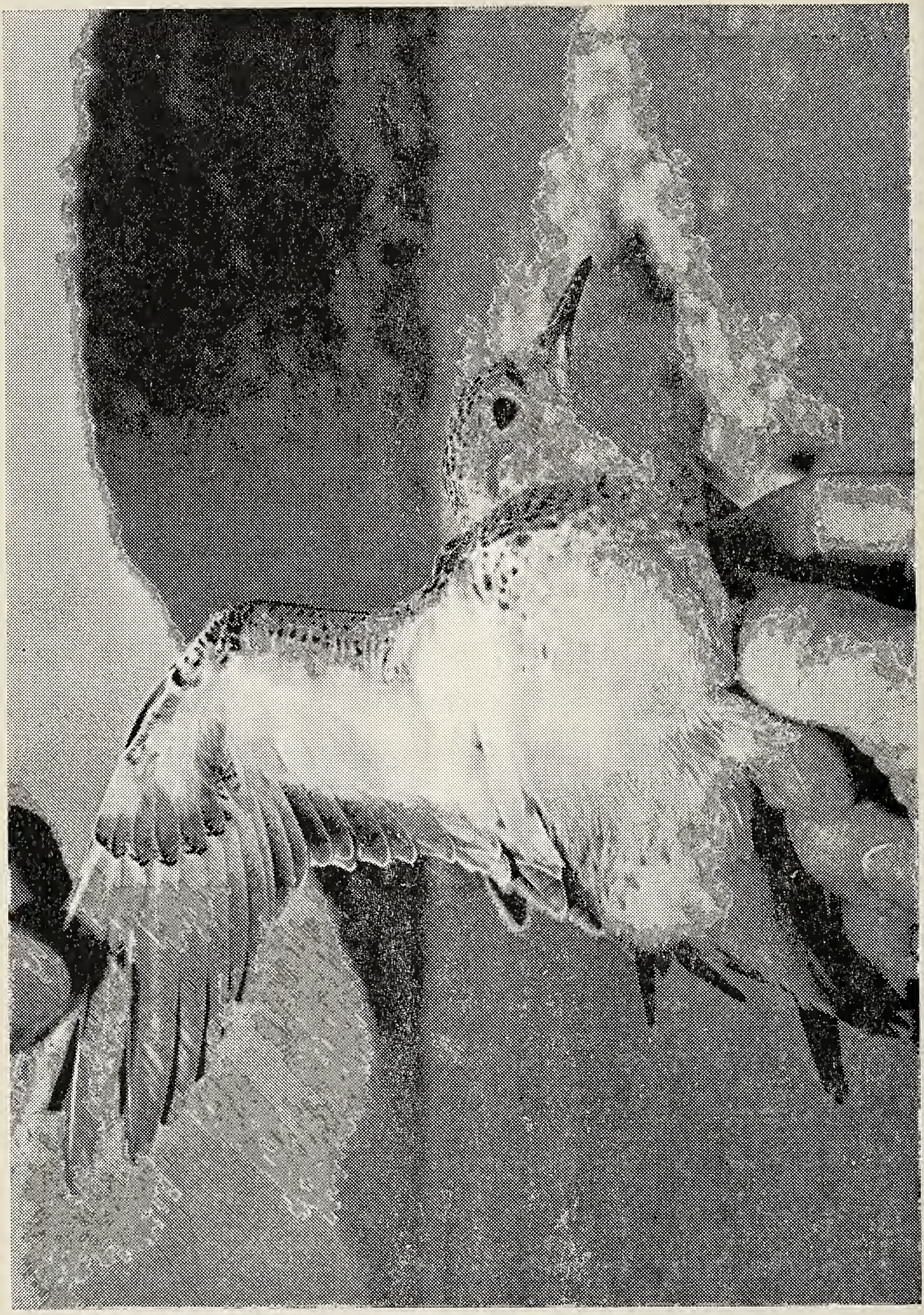
Tennessee's six previous records lists four observations in west and two in middle Tennessee. (See Sight Record Chart). These records have accounted for the T. O. S. published records prior to 31 August, 1963. On this date, Kenneth H. Dubke found and observed the Buff-breasted Sandpiper at the Roan Creek section of Watauga Lake. The area setting can best be described as a mountainous region where Roan Creek flows onto a long flaring mud flat created by the lowered Watauga Lake. The mountains surrounding the flats rise abruptly from the valley floor to a maximum elevation of 3000 feet. Elevation of the mud flat is 2000 feet.

The Buff-breasted Sandpiper did not exhibit any unusual alarm to close observations or swift movements as it was viewed feeding among Lesser Yellowlegs (1), Semipalmated Sandpiper (2), Pectoral Sandpiper (1), Spotted Sandpiper (1), Least Sandpipers (5), and Killdeers (5). Observations were made at ranges of less than 20 feet with both binoculars and scope.

The uniform, solid buff underparts created a spectacular contrast to the dark mud of the "flats". The legs were a yellowish-green. These factors excluded the Baird's Sandpiper which would come closer in description by having a white belly, buff breast, and black legs.

The Buff-breasted Sandpiper was a constant companion of the Lesser Yellowlegs and was observed to feed within a few feet of that bird at all times. When the birds were flushed, the Lesser Yellowlegs and Buff-breasted Sandpiper would again pair off and resume feeding near each other.

An effort to check the presence of the Buff-breasted was made early 1 September, to see if it still remained in the same area. Again, the bird was spotted and observed, this time with Charlie Smith, Carol and Ralph



Buff-breasted Sandpiper banded at Roan Creek area of Watauga Lake, Johnson County, Tennessee. Photo by the author.

### T.O.S. SIGHT RECORDS OF THE BUFF-BREASTED SANDPIPER

| | Location | Date | Observer | Number Seen |
|---|---|---|---|---|
| 1. | West Tenn.<br>Air Base at Halls | 19 Sept, 1943 | Burt L. Monroe | 2 |
| | ". . . . Fed around the edge of the pond and in the clods and hillocks some distance away." | | | |
| 2. | Near Memphis<br>Mud Lake - Miss. & Tenn. | 16 Aug. 1952 | Lula Coffey | 1 |
| | "The slim upland sandpiper resemblance was in contrast to the "peeps" feeding nearby." | | | |
| 3. | Tenn. Nat. Wildlife Refuge, Middle Part of Kentucky Lake<br>Duck River Bottom | 9 Sept, 1953 | Eugene Cypert | 2 |
| | ". . . . Feeding on mudflats in company with Killdeers and Pectoral Sandpipers." | | | |
| 4. | Memphis —<br>President's Island | 21 Aug. 1954 | Harry Landis & George Peyton | 1 |
| | Memphis —<br>President's Island | 28 Aug. 1954 | Harry Landis, George Peyton and Ben Coffey | 2 |
| | ". . . . Feeding on mudflats in company with Killdeers and Pectoral Sandpipers." | | | |
| 5. | Nashville<br>Bush Lake | 16 Sept. 1959 | Henry Parmer | 2 |
| | "In the early morning sun the heads, necks and breasts seemed to be the color of an old khaki shirt." | | | |
| 6. | Nashville<br>Bush Lake | 11 Sept. 1960 | John Ogden | 2 |
| | ". . . . Found feeding in a field of newly sprouted turnip greens." | | | |
| 7. | Northeastern Tenn.<br>Roan Creek &<br>Watauga Lake | 31 Aug. 1963<br>7 Sept. 1963 | Kenneth H. Dubke<br>Ralph & Carol Bullard<br>Charlie Smith | 1 |
| | Feeding on mudflat devoid of grass | | | |

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Bullard. Plans were made to return that evening with banding equipment and attempt capture. On returning to the location, the Buff-breasted was located for the third time. Even though the light was fast fading, two mist nets were hurriedly placed along a narrow portion of the mud flat. A slow, 15 minute, two man "drive" through the mud was well rewarded by the catch of both the Buff-breasted Sandpiper and its companion the Lesser Yellowlegs. Measurement was made on the Buff-breasted Sandpiper as follows: Wing 127 mm. (133), Tail 51 mm, Bill 17 mm (20), Fat Class 1. Measurements in parentheses are converted from Chapman (1926) page 260 as a comparison. This bird then became the first of its kind to be banded in the state when band number 61-150698 was assigned. It is interesting to note that ". . . . the peculiar speckling on the inner webs of all the primaries . . . ." as described in Chapman (1926 Page 260) was present and quite evident in this Buff-breasted Sandpiper.

The two birds were bagged and kept for photographs on the following morning. The final photographs were made by placing the Buff-breasted on a rock then slowly removing the hand. Here the bird remained motionless long enough to be photographed five times. It then rose to its feet and walked about 100 feet into the grassy field where it began feeding. After approximately one minute, the Sandpiper flew down into the mud flat and was last seen feeding there. Bent (1934) page 74 records, "Much of the behavior . . . . , reminds one of the upland plover; it seems to prefer the grassy places rather than the open flats or shores. . . ."
NOTE: Sight Records Table — Comments pertaining to observations on feeding where given.

Observations made by Kenneth Dubke on 7 September continued to reveal the presence of the banded Buff-breasted. A routine check on 8 September, failed to find it. It is assumed that the urge to migrate was stronger than the hospitality of East Tennessee (sic).

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## ROUND TABLE NOTES

OSPREY NEST ON WATTS BAR LAKE.—This is a year late but our acting editor of THE MIGRANT, upon finding very few records of Osprey nests in Tennessee, has suggested that I write something about the one I observed on Watts Bar Lake.

On Friday, 11 May, 1962, my family and I were guests of Mr. and Mrs. Richard Wilson, Red Cloud Cottages, Ten Mile, Tenn., who arranged for us to visit a large nest on top of a navigation marker. The lake is wide near the nest and about six miles above Watts Bar Dam. After getting settled, a boat was secured and we were soon on our way to view it. As the fast boat narrowed the distance we could see the silhouettes of two large birds perched above the flashing light, and soon there was no doubt that they were Ospreys. They took to the air when we approached fairly close but soon returned after the roar of the boat motor stopped. A spirited series of high-pitched notes followed as if the Ospreys were discussing their almost finished nest.

One of the birds again took to the air and made a wide circle of the lake. On its second time around it swooped to the water, caught something in its feet and rose laboriously. The catch was a long, crooked piece of driftwood which was brought back and arranged in the nest to the accompaniment of more conversation.

In later correspondence with Wilson I learned that the birds apparently started incubating, but still later the nest was abandoned without any sign of young or eggs left behind. However, the pair continued to be seen in the general area.

The flashing navigation light was supported by several pilings that extended well above the highest level reached by the water. The nest was on a platform or roof above the light and did not interfere with it in any way.

A nest at the same location a year earlier is mentioned by Rock Comstock, Chattanooga, in the September, 1961, issue of THE MIGRANT. The Coast Guard had removed the nest in repairing the navigation marker and had presented it to Elise Chapin Audubon Sanctuary in Chattanooga.

Kurt Krause, curator of the Sanctuary and a TOS member, wrote an interesting story for The Chattanooga Free Press on 21 July, 1961, that contained the following:

"The nest . . . . is five feet wide and two feet deep . . . . The structure first gives the impression of a large pile of twigs loosely heaped together. Closer observation, however, shows that the material is closely woven and intertwined, and the nest is so firm and compact as to have withstood much rough handling and transportation without coming apart.

"Branches more than an inch in diameter, pine limbs with the cones still attached, and corn stalks and cobs make up the basic structure. The lining consists primarily of uprooted clumps of grass with the roots still embedded in soil. Some of these are beginning to sprout. . . . The nest also contained a portion of the shell of a 2½-inch-long egg which had been hatched. The particular egg, about half of the shell of which is available, is a light brown with darker blotches.

"Warrant Officer Donald Luedke, who secured the nest, states that on several prior occasions when the tower was being serviced, nests of seemingly the same pair of birds have unceremoniously been dumped into the water.

"On the present occasion, the tower was being repaired, and as a derrick was thus available, the nest was placed on a board platform, fastened by a couple of loops of cable, and brought to Chattanooga on the Coast Guard cutter. Luedke reports that the one Osprey present hovered in the vicinity of the boat, giving voice to its protest and grief in screams. . . .

"Three nights later the cutter was in the vicinity again and flashed its light on the tower. There, peering over the side of a partially built nest, was the Osprey, clearly defying its human tormentors to do their worst."

Krause also told of many fish scales, both large and small, being found in the nest and one numbered fish tag that had originally been placed on a white bass by TVA. To show how facts can be distorted by rumors, the attendant at the boat dock told me soon afterward that the newspaper had said the nest had been "full of game fish tags."

There is support for the Coast Guard officer's remark concerning nests having been present in former years. Hugh Johnson, of the Tennessee Game and Fish Commission, visited the nest in 1960 and found two large-size nestlings but was not sure of their identity. The same year after the young had flown, Bill Yambert, also with the Game and Fish Commission and a TOS member, inspected the nest and expressed the belief that it had been built by an Osprey.

However, it may be that the Ospreys have now abandoned their claim to the marker. I have been away most of the summer just passed and have not visited the lake, but I recently phoned the Wilson home. Miss Marjorie Wilson said the Ospreys came back this year but she did not think they made any attempt to nest on the marker. She added that there have been reports of what is believed to be an Osprey nest on a wooded island in the same general area. Possibly the increasing number of boats on the lake and extra attention the nest was receiving following publicity in newspapers could have influenced their move.

I have found only three other references in THE MIGRANT to Osprey nests in Tennessee. John O. Ellis recently wrote of one active and one inactive nest at Reelfoot Lake (THE MIGRANT, **34**, 22-23, 1963). John B. White recorded that a conservation officer observed a pair building a nest on Davy Crocket Lake, Greene County, in 1940 (THE MIGRANT, **27**, 4 1956). William M. Walker described two nesting attempts at Andrew Jackson Lake in Knox County. Both nests were torn down before completion because "the birds caught too many fish." (THE MIGRANT, **8**, 53, 1937).

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FIRST LEAST BITTERN RECORDED FOR THE SMOKIES.—On the morning of 23 Aug., 1963, an adult female Least Bittern *(Ixobrychus exilis)* was found by Mrs. Thomas J. O'Brien on Roaring Fork Road (1400') in the city of Gatlinburg. The cause of death could not be ascribed to either a collision with an automobile or to weather conditions. This discovery constitutes the first record of this species in the vicinity of the Smokies. This specimen was prepared as a study skin and deposited in the permanent collection of the Great Smoky Mountains National Park.

THOMAS SAVAGE, GSMNP, Gatlinburg, Tenn.

A SET OF SEVEN MOCKINGBIRD EGGS.—As 7 egg clutches of Mockingbird *(Mimus polyglottos)* eggs are very, very rare, a set found in the Nashville area is herewith placed on record. A search of the literature has revealed only one other clutch of 7 eggs for the species, cited for Oklahoma (1927) by M. M. Nice in **Birds of Oklahoma** (1931, p. 138). No sets exceeding 5 eggs have been found in Tennessee. Only 3 clutches of 6 eggs are on record (1962, A. R. Laskey. Auk. 79:599).

This nest was noted in mid-April 1963 by Mr. and Mrs. H. C. Hodgson at their home on Hermitage Rd., Old Hickory, Davidson Co. which is about 9 miles (air line) northeast of the center of the business section of Nashville. After an earlier attempt to build in a barberry shrub, the nest was placed at the top of an upright yew **(taxus)**, close to the house, 5.5 ft. from the ground and well concealed.

As it would have been necessary to use a ladder to see into the deep nest, the owners felt that this would disturb the birds, therefore the exact laying dates were undetermined and the number of eggs was unknown until the nest was removed.

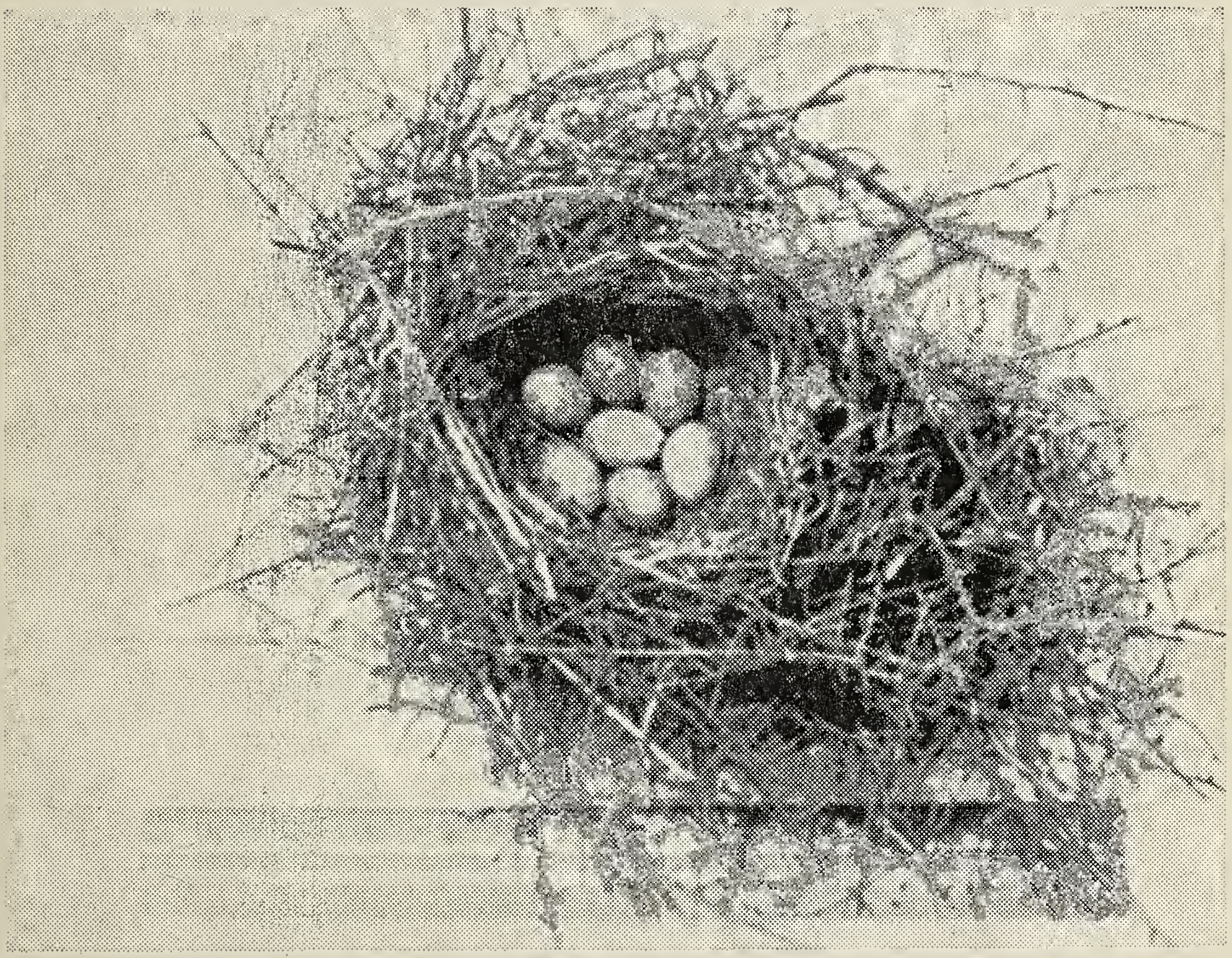
However in late April or early May, one of the pair, presumably the female, was found dead on the ground near the nest site. Some weeks later, after the Hodgsons were sure there was no activity at the nest, it was removed and brought to me 1 June.

The 7 eggs were addled and indicated only brief incubation. All were uniform in color and markings of typical Mockingbird eggs and were similar to each other.

The nest was remarkable in size, the largest that I have ever seen. Across the top, it measured 10 x 13 inches; height 6 inches. The cup was 3 to 3.5 inches wide and 3 to 3.5 inches deep. It was composed of the usual materials and the typical form used by the species — many twigs, an inner compact layer of pliable materials, with lining of brown rootlets.

Cause of the death of the female was undetermined. There were no visible indications of injury or predation. The only clew available that might account for the death was the April fruit tree spraying with malathion in the neighborhood.

AMELIA R. LASKEY, 1521 Graybar Lane, Nashville, Tennessee.



**Clutch of seven egg nest of the Mockingbird found in the Nashville area. Photo by H. E. Parmer.**

(Continued from page 54)

Blue Grosbeaks appear to becoming more regular in our area with a single bird found singing 21 and 28 July and 4 Aug. at the Roan Creek area. Fred Behrend and Wallace Coffey had a bird singing in Lynn Valley 27 July. Ed Davidson also recorded the bird in the same area the first part of June. Ken Dubke and Charlie Smith, in addition, had a singing male in the area of the Watauga River Prong of Boone Lake on 4 August. Fred Behrend again found the Purple Finch and Pine Siskin on Roan Mountain (see THE MIGRANT **34:** 38-39, 1963) with an unusual record of a Pine Siskin at 4500 feet elevation on 1 Sept. near the Rhododendron Village Resort.

KENNETH H. DUBKE, 918 State Line Road, Elizabethton, Tennessee.

# THE MIGRANT

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I am grateful for this opportunity to congratulate Ken Dubke on the fine job he has done with THE MIGRANT in the absence of our editor, and to add my personal thanks to the many others I am sure he has received.

Many of you I have not had the pleasure of knowing, so brief is our annual contact with members not in our own chapters. I hear by the grapevine that our 1964 meeting will most likely be at Reelfoot, but wherever it is, West Tennessee will have planned a good one, and I hope to see you all then. It is not too early to tell yourself you just must go to this one, and to plan accordingly. If you haven't been to Reelfoot in Spring Migration you don't know what you have missed. Let's see how big we can make the 1964 Annual Meeting of TOS.

SUE M. BELL.

## NOTES FROM THE EDITOR

Singular honor has recently been conferred upon one of the founders of the Tennessee Ornithological Society. Mr. Albert F. Ganier has been commissioned a Colonel on the staff of Governor Bert Combs of Kentucky. Colonel Ganier suggested and was instrumental in the organization of the Kentucky Ornithological Society in 1923. He has attended most of their annual meetings and recently participated in their fortieth anniversary celebration at Mammoth Cave, Kentucky, 11-13 October. The subject of his address was: "The Contributions of the Kentucky Ornithological Society to Ornithology."

A similar honor was conferred upon Colonel Ganier's and our good friend, the only living founder of the Kentucky Ornithological Society, Dr. Gordon Wilson of Bowling Green, Kentucky.

We extend our most sincere congratulations to both of these outstanding ornithologists and may both of you continue your valuable contributions to the ornithology of our sister states for many years to come.

Most sincere appreciation is hereby expressed to Mr. Kenneth Dubke for assuming the responsibility and so ably editing the March and June issues of THE MIGRANT and assembling the material for the September issue during the absence of your editor.

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# THE MIGRANT

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DEVOTED TO TENNESSEE BIRDS

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VOL. 34 DECEMBER 1963 NO. 4

## MORTALITY OF NIGHT MIGRANTS AT NASHVILLE T V TOWERS, 1963

### By AMELIA R. LASKEY

In 1963 as in previous years during the autumn migration, daily visits were made to television towers in Nashville.

The total number of casualties collected for this season from 3 Sept. through 10 Nov. was 630 individuals of 62 species, as follows: WSM, 321 of 39 species; WSIX, 292 of 55 species; WLAC (one collection), 17 of 7 species.

At WSM, Katherine A. Goodpasture alternated with me on early morning visits from 3 Sept. through 7 Nov., excepting 28 Sept. when H. E. Parmer and H. C. Monk made the collection which proved to be the largest for a single night in 27-28 Sept., 1963, 136 birds of 21 species. At WSIX my first visit occurred 21 Aug. when the overcast of the previous day with north wind could have caused casualties if migration had been heavy, but none was found. Regular visits to WSIX began 13 Sept. after rain and north wind on the previous day and night. Clara W. Fentress and I collected 8 casualties there and I found one at WSM, the first found there for the season, although one of the outdoor employes told me that he found 4 little yellow birds in August. The daily visits at WSIX continued through 10 Nov. with help from Mrs. Fentress.

A. F. Ganier made one collection at WLAC TV tower on Brick Church Pike in North Nashville on 15 Sept. This tower (including antenna) is 1179 ft. high, 870 ft. above sea level.

Autumn weather was unusually clear and dry in 1963 which restricted casualties to a number which is now considered a minimum. In Sept., the largest kills occurred on four nights: 13-14 (WSIX 74, WSM 14); 14-15 (WSIX 20, WSM 22, WLAC 17); 26-27 (WSIX 5, WSM 91); 27-28 (WSIX 29, WSM 136). These kills coincided with precipitation, overcast, north winds in the tower areas excepting that of 14-15 Sept. when fair weather and southerly winds prevailed that morning at the towers, but the U. S. Weather Bureau reported a trace of rain at Berry Field.

For the entire month of Oct. we had unusually mild clear weather (mean temperature 4° above average) and no rain in the area of either tower. However on the night of 27-28 a shower occurred in town and the U. S. Weather Bureau reported north wind and a trace of rain at Berry Field. That night 24 birds were killed at WSIX and one at WSM, the most for any night in Oct. 1963.

The kills of 14-15 Sept. and 27-28 Oct. with fine weather in the tower area, verify the statement made in my previous reports that casualties in numbers may occur when clear weather prevails in the environs of the towers. However when conditions of weather immediately preceding this fair weather and conditions in nearby areas are investigated, this informa-

SMITHSONIAN INSTITUTION APR 10 1964

tion has always revealed that overcast and precipitation have been involved. It also seems probable that migration must have been heavy.

The collected casualties have contributed to several types of ornithological studies. All specimens in usable condition were utilized in taxonomic and biological projects. Even after dissection, they were still usable as food for crippled hawks and owls.

Mrs. Goodpasture has published a valuable article on age, sex, wing length and plumage based on the 1962 collections (1963. BIRD-BANDING 34(4): 191-199) and a paper appearing in this issue of THE MIGRANT based on the 1963 collections.

A number of early and late migration dates were obtained for the season, some of them as new extremes: Virginia Rail (WSM) 20 Oct.; House Wren (WSIX) 19 Sept.; Philadelphia Vireo (WSM) 15 Sept.; Northern Waterthrush (WSIX) 28 Oct.; Yellowthroat (WSIX) 28 Oct.; Indigo Bunting (WSIX) 28 Oct.; Swamp Sparrow (WSM) two, 28 Sept.

Thrush collections were concentrated at WSIX; 38 were gathered from 12-13 through 28-29 Sept. and only 3 (Veery 12-13 and 13-14) at WSM. The peak of 18 at WSIX occurred on 13-14 Sept. when the following were found: Wood Thrush 1, Swainson's 11, Gray-cheeked 3, Veery 3.

In the vireo and warbler families, WSM usually exceeded WSIX in numbers, especially in Red-eyed Vireo, Philadelphia Vireo, Tennessee, Bay-breasted Warblers, Ovenbird, Redstart, but for Northern Waterthrush, the ratio was reversed with 25 at WSIX (13 on 13-14 Sept.) and only 3 at WSM. One Tennessee Warbler had an olive-gray breast, another a typical specimen similar to the grayer-breasted individual of 1961.

The complete list of casualties collected from the three towers in 1963 follows, with the first number indicating WSIX, the second WSM with an asterisk indicating the species was collected only at WSM, third figure indicates a WLAC casualty.

Pied-billed Grebe, 1; Green Heron, 1; American Bittern, 1; Virginia Rail, *1; Sora, 5, 2; American Coot, 1, 2; Mourning Dove, 1, 1; Yellow-billed Cuckoo, 5, 6; Black-billed Cuckoo, 3, 3; Flicker, 2; Red-headed Woodpecker, *1; Yellow-bellied Flycatcher, 1; Wood Pewee, *1; Red-breasted Nuthatch, *1; Brown Creeper, 1, 1; House Wren, 2; Long-billed Marsh Wren, 1, 1; Short-billed Marsh Wren, *3; Catbird, 7, 2; Brown Thrasher, 1; Wood Thrush, 2; Hermit Thrush, 1; Swainson's Thrush, 21; Gray-cheeked Thrush, 7; Veery, 7, 3; Ruby-crowned Kinglet, *1; Yellow-throated Vireo, 1; Red-eyed Vireo, 14, 33, 8; Philadelphia Vireo, 1, 11; Black-and-white Warbler, 4, 10; Worm-eating Warbler, 1, 1; Blue-winged Warbler, 1; Tennessee Warbler, 31, 60; Nashville Warbler, 1; Yellow Warbler, 2; Magnolia Warbler, 20, 22; Myrtle Warbler, 2; Black-throated Green Warbler, 3, 3; Blackburnian Warbler, 8, 6; Chestnut-sided Warbler, 6, 14, 1; Bay-breasted Warbler, 3, 23; Palm Warbler, 8, 14; Ovenbird, 21, 38, 3; Northern Waterthrush, 25, 3; Kentucky Warbler, 6, 2, 1; Mourning Warbler, 1, 1; Yellowthroat, 9, 10; Yellow-breasted Chat, 4, 5; Wilson's Warbler, 1; Canada Warbler, 4, *0, 2; American Redstart, 6, 16, 1; Bobolink, 2, 1; Redwinged Blackbird, 3; Baltimore Oriole, 2, 1, 1; Rose-breasted Grosbeak, *3; Indigo Bunting, 4, 5; Savannah Sparrow, 1; Slate-colored Junco, 1, 1; Field Sparrow, 2; White-throated Sparrow, 5; Swamp Sparrow, 11, 5; Song Sparrow, 2; and unidentifiable because of condition, 5, 4.

At WSM, 17-18 Sept. Red Bat; 21-22 Sept. Hoary Bat.

1521 Graybar Lane, Nashville.

# AGE AND SEX DETERMINATIONS OF TOWER CASUALTIES, NASHVILLE, 1963

### By KATHERINE A. GOODPASTURE

Avian casualties at television towers during night migration represent, in many instances, fair samples of nocturnal migrating flights and can give us information helpful in our attempts at analyzing patterns of migration. This report summarizes age and sex determinations of 385 such casualties collected during September and October, 1963 at Nashville, Tennessee.

In a current article Amelia R. Laskey gives a detailed account of the 1963 collection of dead birds, their specific identification and the accompanying weather conditions(1). Mrs. Laskey deposited the birds as they were collected in deep refrigeration and very kindly made them available to me for laboratory examination over a period of two months.

Four hundred fifty-three of the casualties were examined for age and sex by methods previously described in some detail(2). For determination of age skin was stripped from the skull and examination made for the stippled, opaque appearance of a completely ossified skull or the translucence of an immature one showing the pinkish color of the brain beneath. This is the application of a demonstration by Nero that avian skulls mature gradually and that immaturity can be judged for some months after hatching on the basis of incomplete ossification(3). To determine sex the abdomen was opened on the left side, viscera were pushed aside so as to expose the adrenals and gonads at the anterior pole of the kidneys. Sex was always determined by use of a dissecting microscope using 20-60x magnification. Wing measurements and notes on plumage was also recorded.

Only the 15 species yielding as many as 10 individual records are reported here. Birds of a single species collected on 2 or 3 consecutive days have been considered to represent a single movement. Likewise birds from different towers collected on the same day are treated as a sample of the same flight.

Table I below summarizes data on age and sex of these 15 species. A completely ossified skull has been interpreted to indicate an adult (A); conversely the observation of an incompletely ossified skull has been interpreted to indicate immaturity (I). The letter M indicates male and F female. Individuals in which determination of sex failed are labeled (U).

(See Table I next page)

Swainson's Thrush *(Hylocichla ustulata)*. All 12 Swainson's Thrushes picked up 13 and 14 Sept. had matured skulls with a ratio of 2 females to 1 male. It is of interest to add that all 8 Veeries *(Hylocichla fuscescens)* (7M, 1F) collected on the same days also had matured skulls. Among 30 thrushes of 5 species the first immature was found 22 Sept. and only 4 immatures were recorded for the season. The mid-September flight of thrushes was, it would seem, preponderantly adult.

## TABLE I
### Age and Sex Determinations of Selected Species

| Species | Total | AM | IM | AF | IF | AU | IU |
|---|---|---|---|---|---|---|---|
| Swainson's Thrush* | 14 | 4 | .... | 9 | 1 | .... | .... |
| Red-eyed Vireo | 44 | 9 | 14 | 10 | 11 | .... | .... |
| Philadelphia Vireo | 12 | 2 | 3 | 5 | 1 | 1 | .... |
| Black-and-white Warb. | 11 | 2 | 3 | 5 | 1 | .... | .... |
| Tennessee Warbler | 79 | 17 | 8 | 20 | 22 | 3 | 9 |
| Magnolia Warbler | 33 | 10 | 5 | 12 | 4 | 1 | 1 |
| Blackburnian Warbler | 10 | .... | 2 | 5 | 3 | .... | .... |
| Chestnut-sided Warbler | 18 | 6 | 3 | 6 | 1 | 1 | 1 |
| Bay-breasted Warbler | 24 | 5 | 4 | 6 | 4 | 2 | 3 |
| Palm Warbler | 20 | 1 | 4 | 3 | 9 | 1 | 2 |
| Ovenbird | 50 | 7 | 6 | 15 | 15 | 5 | 2 |
| Northern Waterthrush | 19 | 6 | 1 | 4 | 4 | 2 | 2 |
| Yellowthroat | 16 | 1 | 6 | 2 | 6 | .... | 1 |
| Amer. Redstart | 20 | 9 | 1 | 8 | 2 | .... | .... |
| Swamp Sparrow | 15 | 2 | 4 | 1 | 6 | 1 | 1 |

*Scientific names appear in the text.

Red-eyed Vireo *(Vireo olivaceus)*. A total of 44 were almost equal male and female with slightly more immatures than adults. Of 19 collected 14, 15 Sept., 13 were male, 5 female; 1 was of undetermined sex. They were 2 adults to 1 immature.

Two weeks later, 9/28, a sample of 14 showed a strong reversal of age ratio as well as a weaker reversal of sex ratio:

age ratio sex ratio
14 Sept. — 19 — 2.1 A : 1.0 I — 2.6 M : 1.0 F
28 Sept. — 14 — 1.0 A : 6.0 I — 1.0 M : 1.8 F

Fourteen and 19 individuals are small samples but the mid-September sample was predominantly male and mature, the later one was chiefly female and immature.

Philadelphia Vireo *(Vireo philadelphicus)*. A total of 12 collected on scattered dates gave twice as many adults as immatures and an almost equal distribution of sexes.

Black-and-white Warbler *(Mniotilta varia)*. Eleven were 7 A, 4 I, 5 M, and 6 F. A sample of 10 collected 27, 28 Sept. were 1 A M, 3 I M, with 5 A F and 1 I F. A flight that was 50% adult female accompanied by males 3:1 immature cannot be cited as significant on this small sample but such intraspecific patterns are rarely recognized.

Tennessee Warbler *(Vermivora peregrina)*. This species provided the highest number of a single kind examined. They proved to be 40 A, 39 I; 25 M, 42 F, with 12 of undetermined sex. A mid-September sample of 15 (14, 15 Sept.) gave over twice as many females as males (11 F : 4 M); its age distribution was about equal (7 A : 8 I). Two weeks later (27, 28 Sept.) with a sample of 42 the sex ratio had not changed significantly (26 F : 16 M) and the age ratio was (24 A : 18 I). These figures do not indicate appreciable change in either age or sex ratios during this 14-day interval.

Magnolia Warbler *(Dendroica Magnolia).* Of 33 Magnolias examined, 26 collected 27, 28, 30 Sept. are treated as a sample of one flight. With 19 A and 7 I one may say the flight was almost 3 to 1 adult. The sex ratio was about equal (13 M, 12 F, 1 U) . By recombination 9 A M and 9 A F with 4 I M and 3 I F show virtually equal distribution of all factors except a heavy preponderance of adults. One may ask whether this flight was early, late or median and whether this age ratio might change within an orderly framework.

Blackburnian Warbler *(Dendroica fusca).* Ten of this species were 5 A, 5 I, and 2 M, 7 F, 1 U. Six birds colleced 14, 15 Sept. (1 I M, 4 A F, 1 IU) and three 28 Sept. (1 A M, 1 A F, 1 IU) are too few for analysis.

Chestnut-sided Warbler *(Dendroica pensylvanica).* A total of 18 were 13 A, 5 I; 9 M, 7 F and 2 U. Eleven on 27, 28 Sept. were 10 A, 1 I; 4 M and 7 F. This flight might have been chiefly adult and 60% female.

Bay-breasted Warbler *(Dendroica castanea).* Twenty-three collected 27, 28, 30 Sept. were 5 A M, 4 I M, 6 A F, 4 I F, 1 AU, 3 IU indicating an almost equal distribution of age and sex.

Palm Warbler *(Dendroica palmarum).* Of 20 Palms examined, 17 collected 27, 28, 29 Sept. were 4 I M, 9 I F, 2 A F, 1 AU, 1 IU. This indicates a possible late September flight of Palms predominantly immature and female.

Ovenbird *(Seiurus aurocapillus).* Fifty Ovenbirds approached an equal age distribution with twice as many females as males. Thirteen fell 13, 14, 15, Sept.; 24 fell 2 weeks later, 28, 29 Sept. The age distribution of each sample was roughly 1:1. The sex ratio for mid-September was 1M, 11 F, 1 U; for late September it was 8 M, 14 F, 2 U. This increasing proportion of males is of interest but an isolated observation cannot be used to generalize on such a trend during late September.

Northern Waterthrush *(Seiurus noveboracensis).* Of the 14 that fell 14, 15 Sept. the 9 adults were 5 M, 3 F, 1 U; the 5 immatures were 1 M, 3 F, 1 U. These figures indicate little except an equal distribution of sexes.

Yellowthroat *(Geothylpis trichas).* Nine collected 27, 28 Sept. were 1 A M, 2 A F, 3 I M, 3 I F. As with other species one would inquire whether a 66% immature flight of Yellowthroats in late September has differential significance.

American Redstart *(Setophaga ruticilla).* Twenty Redstarts proved to be 10 M and 10 F; 17 A and 3 I. Seventeen collected 27, 28 Sept. were predominantly adult (14 A, 3 I) and almost of equal sex distribution (8 M, 9 F). Again one wonders if this differential pattern is related systematically to Redstart migration.

Swamp Sparrow *(Melospiza georgiana).* Eight Swamp Sparrows collected 10/28, 30 were 2 A M, 3 I M, 2 I F, 1 AU. Seven collected on earlier scattered dates were too few to interpret.

## DISCUSSION

No attempt at a refined statistical analysis of the data presented above has been made because the small numbers give weak support for any interpretation. However, Tordoff and Mengel consider samples precipitated as tower casualties to be as near a random sample of a single species in one migratory flight as we can, at the present time, make available for study(4). Such samples are well adapted to intraspecific age and sex analyses which in turn can reasonably be considered to represent the flights from which they fell.

Most of the birds reported on in this paper fell on two dates, one the middle of September, the other at the end of the month. In 3 instances birds of a single species collected on both dates allowed us to look for change in the ratios of age and sex.

The most interesting mid-September sample was that of the thrushes which proved to be almost completely adult and very largely female. The mid-September sample of Red-eyed Vireos showed more adults and more males; in late September the species showed more immatures and more females. The combined characters of adult males in the first instance and immature females in the second accounted for 50% of the totals on the respective dates. From mid-September to the end of the month Ovenbirds showed a decrease in the proportion of females; for the same period age and sex ratios of Tennessees remained about the same.

For late September the samples of Black-and-white, Magnolia, Chestnut-sided Warblers and Redstarts were predominantly adult. On the same dates samples of Palm Warblers and Yellowthroats were predominantly immature; those of Tennessees, Bay-breasteds and Ovenbirds were about equal in age distribution. The late September samples of Black-and-whites and Palms were largely female.

For 3 species comparisons of 1963 figures may be made with figures obtained from similar examinations in 1962. In 1962 a 6 Sept. sample of 21 Black-and-white Warblers was 100% immature; in 1963 of 10 collected 27, 28 Sept. 33% were immature. Twenty-one Magnolias collected 6 Sept. 1962 were also 100% immature; 26 Magnolias collected 27, 28, 30 Sept. 1963 were 26.9% immature. In 1962 18 Red-eyed Vireos collected 6 Oct. were 88% immature; a sample of 14 collected 28, 29 Sept. 1963 was 85% immature. The first sample of Vireos was 55% I F, the second was 50% I F.

A particular flight of migrating birds is so closely related to changing weather conditions that single dates have little significance except as related to weather. Random screening by a "meteriologically determined accident" does not occur at regular or at controlled intervals so one must piece together fragments of information like parts of a puzzle. Accumulated data may show that intraspecific flight patterns follow broad calendar dates only as closely as a chain of weather events follow calendars and our problem may be that of finding the systematic way of interlocking these three patterns.

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### Acknowledgments

In addition to thanking all those who helped collect the birds used in this study, I want to thank Mrs. Amelia Laskey especially for her careful labeling and preservation of the specimens as well as for her criticisms of the paper.

3407 Hopkins Lane, Nashville 12.

# THE SEASON

MEMPHIS. — A Common Loon was seen 10 Nov. (BCs) on Porter Lake, while on adjacent Horeshoe Lake (Crittenden County, Ark.) a flock of 30 White Pelicans were seen 12 Oct. (Freeman Wright); also 35 of the latter on Lake Ouachita, 28 Sept. (Dr. Wendell L. Whittemore). Our first Cattle Egret near Memphis was one at Booker, Arkansas, 10 Nov. (BCs). A Wood Ibis was seen 20 Nov. on the river at Shelby Forest (Helen Dinkelspiel). Among a large number of ducks on Horseshoe (and Porter) a flock of 200 Buffleheads, 24 Nov., is much larger than usual. Golden Plover seen: 4 east of Booker 6 Oct., west of Booker 10 on 20 Oct. and 1 on 10 Nov. In a large rice field 5 miles SE of Hoxie, Ark. on 13 Oct., I found a LeConte's Sparrow (my earliest), an American Bittern, and 10 Short-billed Marsh Wrens. A flock of over 8,000 Chimney Swifts seen going down the Power Plant stack, 13 Oct. State College, Jonesboro. The Tree Swallow has been almost absent in fall from the Penal Farm, where once common, and elsewhere east of the river. Across the river it is common; and 11,870 were totaled on a circuit of Horseshoe-Porter Lakes, 20 Oct. An Olive-sided Flycatcher was perched, 22 Sept. at Randolph, Tipton County, Tenn. (BC, LC, Alice Smith, HD). Oliver Irwin watched small flocks (up to 68) of Blue Jays, evidently migrating, over Mud Island, 28 Sept. to 11 Oct. when last noted.

A very unusual record by B. B. Cooper and a companion was that of hearing a Whip-poor-will call about a minute, 9 p.m., 3 Dec., at 5 miles NW of Durant, Miss. Moon was up, weather mild; B. B. has contributed many good records on this species. The Woodcock appears on several lists, including one, 24 Nov. (AS, Katheryn Paullus) at the Ben Carr Pines, and one on Coffey Grounds, 7 Nov. Chapter members finally relocated the Red-cockaded Woodpecker in the Ben Carr pines (E of Pocahontas, Tenn.): 2 on 24 Nov. (T. O. S.), 1 on 4 Dec. (HD, Mrs. Ed Carpenter).

The Red-breasted Nuthatch, not uncommon in non-pine areas as a fall transient. One (our earliest) on 22 Sept. (Victor Julia), Leaf Lake near Randolph, 9 in Riverside Park, 5 Oct. (VJ and OI); 16 on 27 Oct. (T. O. S.) in Shelby Forest. Many stops in pine areas yielded none: Chickasaw S. P., brief, 29 Sept. and 2 Nov.; Ben Carr pines, brief, 16 Nov.; Iuka-Eastport road, 17 Nov. Other pine stops, 4 on 26 Oct., Wall Doxey (Spring Lake) S. P., 1 on 3 Nov., Natchez Trace S. P., 2 on 4 Dec., Ben Carr Pines (HD, TC); only 7 on 1 Dec., Cove Lake and south (Mt. Magazine) and 1, many stops on Ark. 7, N. from Hot Springs, 28 Nov. In latter areas the Pine Siskin in occasional flocks: 50, Hollis, 28 Nov.; 100, Mountain Valley, 1 Dec.; at Cove Lake, 300 on 1 Dec. In the Ben Carr pines, 4 Dec., 8 (HD, TC). At Memphis: Riverside Park, 42 on 2 Nov. (OI, VJ); Overton Park — 120, 7 Dec. (BC), 70 on 8 Dec., 10 on 22 Dec. (WLW), 1 on 4 Jan. On the Count, 22 Dec., also — 20 at Raleigh (Ed King), 22 in Ensley (LC, HD, Earl Fuller). The Lapland Longspur has not been recorded near Memphis (coverage down; 14-inch snow, 22 Dec. may have moved those we had).

BEN B. COFFEY, JR., 672 North Belvedere, Memphis 7, Tenn.

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NASHVILLE. — Our area had a half inch of rain on 7 September, then clear dry weather until November. The result of this was no reports of migrating land birds, and almost no reports of shore birds. December was our coldest ever, with both Bush and Radnor Lakes frozen over most of the time from 13 Dec. to 18 Jan.

All records given here for Bush Lake are by the writer.

There were no fall reports for Loon. Horned Grebe were late with the first a single 9 Nov. on Old Hickory Lake (LOT). They did winter again with 35 there on 18 Jan. (LOT, HEP). Pied-billed Grebe were at Bush in unusual numbers, probably due to a third of the surface of the lake being covered with moss all late summer and fall. Numbers ran from one on 11 July to 29 on 14 Sept. and on up to 46 on 28 Oct. (our largest number ever), then gradually down to the last there, 3 on 27 Dec. Seven were on Old Hickory 18 Jan. (HEP, LOT).

Canada Geese were fairly early with 13 on 4 Oct. and 23 on 8 Oct., both at Bush. Most species of duck were late with the first wave arriving at Bush on 28 Oct. with eight species present. Two Blue-winged Teal were seen on Bush both 18 Nov. and 14 Dec. Both these dates were latest ever at the time. It is thought that they remained continually from Aug. to late Dec., but these two dates were the only times the writer could get close enough to flush the birds and be sure of their identification. A female Pintail at Bush was early on 23 Sept. Three Redheads were at Bush on 31 Oct. and from one to three were seen there on most trips through 22 Jan. Three Canvasback on 4 Nov. were fairly early, and 10 were seen on 22 Jan. Five female Goldeneye at Bush on 22 Jan. Three Bufflehead arrived at Bush on 11 Nov. and from 1 to 3 were there on most trips through 22 Jan. Flocks of 11 Hooded and 12 Common Mergansers were on Old Hickory on 18 Jan. (LOT, HEP). A Red-breasted Merganser was there on 16 Nov.

A female Pigeon Hawk was observed at 50 feet at Bush Lake on 26 Sept. She was perched in a small tree at the edge of the lake. A Green Heron was directly below her and must have been relieved when she was flushed by the writer. This hawk was our eighth record in nearly 50 years. 500 Coot arrived at Bush on 29 Oct. This number slowly dwindled to a few at Christmas. 18 Snipe were at Coleman's lake on 11 Dec. (LOT). A Greater Yellowlegs at Bush on 23 Nov. was the latest ever except for one on our 1923 Christmas Count, MIGRANT 3:42. A Dunlin was there at the same time, our only record so far this winter. Two Ring-billed Gulls were at Old Hickory Lake 21 Sept. (LOT) for our earliest ever, but these could have been two summering birds reported in July, MIGRANT 34:51. They built up in numbers to around 500 on 3 Dec. and to about 750 on 18 Jan. (LOT, HEP), both at Old Hickory. Bonaparte's Gulls were present there 12 Nov. with 30 and increased to 250 by 28 Dec. (LOT), and 200 were seen for our latest ever date on 18 Jan. (LOT, HEP). On 21 Sept. (LOT) found 24 Common and two Caspian Tern at the same lake, the latter a latest ever record.

The last Nighthawks were two on 20 Oct. (HCM). He had the last record for Chimney Swift the day before. Jimmy Parrish found a late Kingbird at Two Jays on 21 Sept. A Least Flycatcher was banded there the same day (KAG). Fall Swallows were extremely scarce. Seven Red-breasted Nuthatch were found in three places on 30 Sept. (SB, ARL, JOE). They seem to have been fairly common to date. The first report of Myrtle Warblers was ten at Pond Creek (HEP) on 6 Oct. and they have been very scarce since. Both Robin and Grackle have been extremely scarce since early Dec. A Mourning Warbler was netted and banded at Two Jays on 14 Sept. by KAG, as was a Wilson's Warbler on 21 Sept. An unusual record was of a Blue Grosbeak she banded there on 15 Sept., our latest ever. First report of Purple Finch to me was one at Basin Springs on 3 Nov. (KAG).

We have had scattered reports since. KAG found a flock of around 25 Pine Siskins on her Basin Springs farm on 3 Nov. and has seen them on most week ends since, plus a flock several times in the nearby South Harpeth Valley. A fairly late Chipping Sparrow was one at home by ARL on 1 Nov. A rare Harris' Sparrow was at the Hodgson home in the deep snow on 23 and 24 Dec. They also reported two White-crowned Sparrows on 10 Oct. An unusual find for them was a Song Sparrow at their home on 25 Sept., an earliest ever date for fall here.

HENRY E. PARMER, 3800 Richland Ave., Nashville, Tenn. 37205.

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COLUMBIA. — Our fall field count was held on 25 Sept. and produced 71 species among which were found the Yellow-crowned Night Heron, Black-billed Cuckoo, Barn Owl, Bewick's and Short-billed Marsh Wrens, 13 species of Warblers and Vesper Sparrow. Dan Gray III identified a Brewster's Warbler on 18 Sept. A Sanderling was seen at Arrow Lake 1-7 Sept.

Seventeen species of ducks and several flocks of Canada Geese were found on lakes and Duck River from September thru December. Ponds, lakes, and much of river froze over before two record nine and eighteen inch snowfalls 22 and 31 Dec. Ducks were numerous on unfrozen patches of river (see Christmas Count).

Birds at home feeder and Arrow Lake feeder were numerous, but rapid melting of snow apparently prevented food problems for birds, who survived deep snow well by repeated counts. Large flock of Kingbirds (over 50) seen Arrow Lake 1-15 Sept. As many as 30 Hummingbirds in the marsh until 6 Oct. Nighthawks stayed until 18 Oct. Last Warblers: Tennessee, Black-throated Green 13 Oct. Northern Waterthrush 12 Oct., Magnolia and Palm 20 Oct. Sparrow arrivals: Swamp 6 Oct., White-throated, 13 Oct., White-crowned, Song and Lincoln's 20 Oct., Fox 9 Nov. Osprey at Arrow Lake in Sept. Common Loon there 19 Dec.

GEORGE R. MAYFIELD, JR., Maury County Hospital, Columbia, Tenn.

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COOKEVILLE. — At recent meetings of local TOS members numerous comments were made about the scarcity of birds during the fall months. Some physical factors may explain this dearth in part. A bumper crop of domestic fruits, and wild fruits (except blackberries), were favorable for the birds until some kinds became prune-dry (high bush cranberries). Hackberries, rose hips, and others, fared a little better. During the early snows Cardinals even tried the seeds of the tulip (poplar), and catalpa beans. Observed areas in town had an ample supply of water, but this was less so in certain rural areas.

Some "firsts" from the compilers backyard: 8 Aug. the first Pewee ever found there; 1 Oct. First Grackles were seen in flocks; 10 Nov. First snow, barely a ground cover; 17 Nov. A snow heavy enough to drive birds into feeding areas; 23 Dec. Sixth snow; 4-5 inches; 27 Dec. Seventh snow, light, just before count day — 28 Dec.; 31 Dec. Snow, sleet, freezing rain, then more snow, six inches on level ground.

Comments by other TOS members of this area: Uneven distribution of Purple Finches, none where once common, numerous a few blocks away (S. McG). Some reported Brown Creepers for the first time, others saw more than usual (CP & CW). Several Fox Sparrows were found in town, more than commonly so (CH). Song Sparrows have developed regularity in visiting some yards (CP & CW). A Screech Owl has taken over the one-time nest of a Flicker (CH). Dr. Bruce (physics) is the dove champion — more than 90 counted as they came in to feed, but only 64 on count day. (He puts cracked corn out before daybreak — all gone before Starlings arrive. If put out at night, rabbits profit too much.)

Clearing a swampy woodland on Tech campus has left a natural habitat for Snipe. One, along with Killdeer, was seen on count day. It was seen several times since, but Mrs. Knight, wife of Dr. E. B. K., Ag. school, did the clinching identification when one lit within ten feet of her window in a well-lighted spot (not on count day).

P. L. HOLLISTER, Tenn. Tech., Cookeville.

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KNOXVILLE. — Late fall migrants were a flock of 120 Nighthawks seen by Paul Pardue on 24 October and a single Green Heron by James Campbell on 28 November. Most fall migrants passed through or departed on their usual dates.

Four species of birds are more abundant this winter than usual: Pine Siskin, Red-breasted Nuthatch, Yellow-bellied Sapsucker, and Rusty Blackbird. Pine Siskins have been very abundant in the nearby Great Smoky Mountains this past fall and winter, greatly exceeding the numbers of Goldfinches there. The first one was not recorded from Knox County until 27 November and on the Christmas Count there were three to four times as many Goldfinches as Siskins, but this is the first in several years that the latter has been present. Red-breasted Nuthatches were first reported on 19 September, Sapsuckers on 28 September, and Rusty Blackbirds on 10 November. A large roost of Starlings and various blackbirds has been present all fall and winter in the Ebenezer Road section of western Knox County. The number of birds using the roost has been estimated to be between 200 and 500 thousand birds; it has not been possible to break this down to numbers of each species.

A Lark Sparrow, the first known to winter in this area, has been at Mrs. T. C. Swindell's feeding station since 14 October and was still present on 10 January. Another Lark Sparrow appeared at the feeding station of Jerry Payne in Oak Ridge about 3 January. Another rarity was a White-winged Crossbill seen by James Campbell at Cove Lake, Caryville, about 1 January; small numbers of these have been seen this winter in the Smokies. Lesser rarities for this immediate area were small flocks of Red Crossbills seen at my home in southern Knox County on 26, 28 December, and 11 January, and a Barn Owl seen by Joseph Howell on 22 December.

Although Evening Grosbeaks have been seen in numbers to the northwest of us at Oneida and to the south of us in the Smokies, the only Knox County record this year is one seen on 26 November.

The only bird which has been notably scarce this year is the Phoebe; only one was seen on the Christmas count.

JAMES T. TANNER, Department of Zoology, University of Tennessee, Knoxville.

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GREENEVILLE. — The season seemed to be very good for the hatching and rearing of Bobwhite and Ruffed Grouse. They were seen in greater numbers this season than any in the past several years. Bluebirds were slightly more abundant than last year. Blue Grosbeaks were again present in two sections of the county. By 25 June they had taken over in a silage field and were chasing another pair away. The first week in August a male and female with four immatures were feeding in a silage field, but we were unable to locate the nest (Richard Nevius). On 16 Sept. the male of the pair in the eastern part of the county was heard singing for the last time (Elva Darnell). On 27 April several Common Gallinules were seen near a small pond close to Mosheim. On 28 April The Green County Chapter held its spring census after an eastern storm on the Atlantic Coast and were fortunate to have seen some species not commonly seen here. These were Laughing Gull, Forster's Tern (ED), Common Gallinule (RN), and Red Phalarope (Clemens). On 3 May one female Wood Duck with seven young was seen on the Little Chuckey River (Roberts & Morrell). On 11 May one male Prothonotary Warbler was heard singing over Lick Creek on the western side of the county. On 28 June a male Prothonotary Warbler was seen again where one was heard singing earlier in the season.

On 13 Sept. 200 Nighthawks were observed flying south (Clayton). Bobolinks were in the silage and a large flock of Canada Geese was seen over Lick Creek, all signs that fall migration had started again. On 31 Aug. Red Crossbills were seen feeding in the hemlocks on lower Paint Creek, a stream in the eastern part of the county close to Rich Mountain. They were first observed on the low branches then they moved up to the top of the tree. They also came down to the ground to feed on scraps around the picnic tables (Darnell). On 15 Sept. a Bald Eagle and Cliff Swallows were seen on Camp Creek Bald on the North Carolina state line.

On 16 Sept. a large flock of Broad-winged Hawks (1257) were over Bluff Mountain and a Virginia Rail in an alfalfa field (RN). On 17 and 19 Sept. Rose-breasted Grosbeaks were seen and on 19 White-breasted Nuthatches. By 23 and 24 Sept. we had two days of 34 degree temperature and frost. By 4 Oct. a Great Blue Heron was seen and occasionally into the winter. On 5 and 6 Oct. our annual fall get-to-gether at and around Camp Creek Bald yielded a total of 65 species. Some of those found were Red- and White-breasted Nuthatches, Brown Creeper, Wood Thrush, Swainson's Thrush, Veery, Golden- and Ruby-crowned Kinglet, Tennessee, Nashville, Cape May, Chestnut-sided, Bay-breasted and Wilson's Warblers. On 30 Oct. Yellow-billed Cuckoos were still around and Cedar Waxwings had started to come in (RN). On 2 Nov. on Davy Crocket Lake a phalarope, which was not identified as to species was seen (ED). This is the first phalarope known in Greene County, although other reports have them at Alcoa and Gatlinburg at this time of the year. On 3 Nov. while making a return trip in search of the phalarope of the previous day two Rough-winged Swallows, a Common Loon and a Pied-billed Grebe were seen (Darnell and Nevius). On 10 Nov. a flock of 21 Wood Ducks were seen on a small creek (RN). On 12 Nov. another flock of 40 Cedar Waxwings were seen. Great Horned Owls were hooting by the middle of December.

On 18 Dec. the temperature was 8 degrees and on 19 2 degrees and many of the small birds up to and including Red-bellied Woodpeckers were coming to porch for food. On 21 Dec. a Palm Warbler was coming to the feeder (Gaut).

On 27 Dec. we took our annual Christmas Count with 8 inches of snow on the ground. Birds were not hard to find but were not in the usual places, none in the open fields due to the snow cover, rather plentiful around tall weed patches and thick hedge rows and in evergreen stands. Horned Larks were abundant around the cattle feed boxes and on the roads but not in their usual places on the pasture fields (RN).

RICHARD NEVIUS, Route 3, Greeneville.

KINGSPORT. — Sometimes the weather seems to have little relation to the activities of the birds we observe. At other times we notice direct relationship as in the numbers of migrating birds coming with a cold front in the autumn. The weather of the season just past made possible many of our most interesting observations. The Warblers filtered through the trees for almost three months in fall migration. We think the very dry, rather warm weather of October and early November prolonged the migration. We had Myrtle Warblers 4 October and many more than the usual observations of Tennessee Warblers in early October through 17 October. The Nighthawks stayed late with the last date 11 October. White-throated Sparrows first appeared 12 October while the Catbirds were still here. With the first frost on Halloween we recorded the first Juncos. The next week brought Canada Geese 9 November, and we saw a belated Red-eyed Vireo. 13 November we had our first snow and recorded American Mergansers and Wood Ducks. On 16 November, a clear bright day with a temperature of 45°, I saw a Hooded Warbler, a brilliant male, in a pin oak at a distance of about 10 feet. All that week a flock of Cedar Waxwings had come regularly to drink from my ornamental fish pond. Howard Young later observed flocks of Waxwings in December. The nights of the two middle weeks of November were below freezing, but the days were warm and windless, clear and dry. Boone Lake was very low. On 19 November about noon with a temperature of about 65° I saw one Broad-wing Hawk on an updraft over Boone Lake. At the State Park a half hour earlier I had watched Turkey Vultures and five Black Vultures soaring over the River. On the Holston there were Scaup and Baldpate. During the last week of November and the first of December we had light snows but the White-throats and Song Sparrows continued to sing and on 7 December at 8:50 a.m. the Arthur Smiths saw a Black and White Warbler. At the feeding station of Mrs. Fred Kays the male Baltimore Oriole continued to appear.

December and January brought temperatures much below normal and two deep snows that lay on the ground for more than a week. The snows provided unusually good bird watching for feeding station operators, and probably the cold weather accounted for the many species of ducks moving in and out of the area. Pine Siskins have been recorded oftener than usual, Red-winged Blackbirds, Fox Sparrows, Evening Grosbeaks and Purple Finches have been seen regularly by different observers. In general I think we may conclude that while the first part of the season was rather warm and very dry, the last part of the period quite cold and very snowy, the activities of the birds, like the weather, have been both expected and unexpected, as usual.

ANN SWITZER, 1620 Fairidge Place, Kingsport.

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BRISTOL. — The winter in our area has provided a fairly cold season accented by two heavy snows. The first accumulated over the night of 22 December to a depth of five or six inches and the second offered a seven inch white blanket on 13 January.

Area observations focused on South Holston Lake with field trips getting a late start on 2 November and staggering until the pace was caught up by 1 December. After this date, observations became more intense with weekly trips providing rich rewards.

South Holston Lake, elevation 1729 feet, is one of TVA's deep mountain reservoirs. Characteristic for its small waterbird populations — seldom reaching as many as a hundred birds — it has maintained one of its greater populations in recent years. Waters were frozen in the upper lake areas on 22 December and remained solid with nearly half of the lake freezing over during the extreme cold of 19 January.

Common Loons remained late on the lake with single birds recorded for 1 Dec. (WC), 22 Dec. (KD, WC) and three on 28 Dec. (HW, WC). Horned Grebes were present fairly regularly. Three observed on 22 Dec., 28 Dec., and four and five respectively on 2 and 4 Jan. Pied-billed Grebes have been located on all visits, generally in numbers from one to four individuals with a peak observation of 11 on 22 Dec. (KD, WC). First record of the Great Blue Herons came on 24 Nov. (SF, WC). One to four birds were present on most other visits.

Our only record for Canada Geese was of 60 birds passing in wedge formation at a very high altitude near 421 Bridge on 21 Dec. (RQ, WC). Mallards were present 22 Dec. (5), 28 Dec. (10) and 18 Jan. (1). Black Ducks appeared regularly in numbers from two to 16 since 22 Dec. Only two Canvasbacks noted: a single bird on 16 Dec. (WC) and 20 Dec. (FB, WC).

Other waterfowl observations included Lesser Scaup: 2 Nov. (1), 28 Dec. (5), 2 Jan. (6) and 4 Jan. (10); Common Goldeneye: five to 20 birds on dates of 22 Dec., 28 Dec. and 2 and 4 Jan. Buffleheads ranging from five to 20 birds with our first record coming on 1 Dec. Hooded Mergansers round out the list with observations on: 22 Dec. (11), 28 Dec. (6), 2 Jan. (1) and 4 Jan. (2).

It appears to be a good winter for hawks with records for six species. Cooper's Hawks were seen on three occasions with a spotting from Fairacres on US 11E, one bird 27 Dec. (WC); three on our Christmas Count of 28 Dec. and one additional observation at South Holston Lake, 4 Dec. (EV, WC). Broad-winged Hawk flights began with a count of 13 floating by the Clinch Mountain fire tower near Mendota, Virginia on 31 August (GC, WC). Red-tailed Hawks present 21 Dec. (RQ, WC) and 28 Dec. (HW, WC) with single birds being seen on each occasion. Two Red-shouldered Hawks made our Christmas Count. Reports came from the South Holston River, 28 Dec. (JA, FB) and on the same date an additional report (RQ) from Southwest Virginia. Two adult Bald Eagles were observed near the 421 Bridge at South Holston Lake on 20 Dec. (FB, WC). Sparrow Hawks were common throughout the period with regular reports.

An American Coot was identified on 2 Nov. and was the first observation for the season. An additional bird appeared on South Holston River near the middle of December and remained into January.

Ring-billed Gulls, whose presence is seldom noted in large numbers until March, was first seen on 20 Dec. (1) and has continued with records for 22 Dec. (2), 2 Jan. (6), 4 Jan. (2) and 18 Jan. (6).

A single sight record of a Great Horned Owl was obtained at Observation Knob Park on the evening of 15 Jan. (GMM).

Turkey Vultures have been present into Jan. A group of 20 birds perched in the trees near Jacobs Creek at South Holston Lake on 30 Nov. (SF, WC) was our largest single report of individuals.

Woodpeckers were found on most field trips to include Red-headed Woodpeckers wintering for the second consecutive year. Single birds appeared on 25 Dec., 2 and 15 Jan. Most persons report the Red-bellied with the first fall record for the Yellow-bellied Sapsucker on 12 Oct.

Other notes of interest include: Winter Wren, a single bird 28 Dec.; two Robins 19 Jan.; our only report of Bluebirds was at 421 Bridge on 4 Jan.; a single Water Pipit feeding below South Holston Dam on the reservation 21 Dec. (RQ, WC), and 4 Jan. (EV, WC). Cedar Waxwings first noted 20 Oct. with an occasional Myrtle Warbler seen in the vicinity of several feeding stations.

Blackbirds have been in particular abundance with Redwings on 2 Nov. (1) and three observations from a mixed flock feeding in a farm yard near Saddle Dam on 2 Jan. (30), 4 Jan. (26) and 18 Jan. (12). Rusty Blackbirds found near Wheeler's Dock 28 Dec. (5) and 4 Jan. (100) (EV, WC). Additional records include: Brown-headed Cowbird on 20 Dec. (6), 28 Dec. (13), 2 Jan. (6), 4 Jan. (2) and 18 Jan. (16). Common Grackle, which can seldom be located here in winter, have been reported in great abundance from all reports with numbers in the hundreds not at all uncommon. Maximum observations have been given for 2 Nov. (EV, WC) with a count of 1075 and 1030 individuals tabulated for the Christmas Count on 28 Dec.

Evening Grosbeaks have been noted at a local feeding station with a single bird being seen on each of the following dates: 1 Dec., 9 Dec. and 18 Jan. (HCE) and 20 Jan. (WC). Purple Finch have visited most feeders since the first report of 11 Dec. (CS) and additional reports from the same station gave numbers up to 50 individuals by 25 Dec. Pine Siskins are in abundance with reports of 17 on 16 Dec. (WC), 21 Dec. (13), 22 Dec. (9), and 94 on 28 Dec. (HW, WC). A single flock of 40 flew over South Holston Dam on 4 Jan.

Our first fall records for the following species have been: Slate-colored Juncos 11 Oct.; White-throated Sparrow on 12 Oct.; and a single White-crowned Sparrow on 28 Dec. Fox Sparrows have been fairly common with reports from several feeding stations during heavy snow falls. The first record of this species was 2 Nov.

CONTRIBUTORS: Fletcher Bingham, Wallace Coffey, George Craig, Kenneth Dubke, H. C. Epperson, Sandra Flowers, G. M. McGee, Robert Quillen, Mrs. Charles Stazer, Enno vanGelder, Hank Woodward.

WALLACE COFFEY, 508 Spruce Street, Bristol, Tennessee.

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ELIZABETHTON. — It now appears that the Common Loon migrates through here in considerable numbers every fall with the first birds (2) of the season on 9 Nov. and a peak of 15 on 27 Nov., then a sharp drop and only one to be found on 24 Dec. Horned Grebes (4) first appeared on 10 Nov. while Pied-billed Grebes (6) were first noted on 29 Sept. No great concentrations of either species has been noted with the usual numbers running from one to seven. Great Blue Herons have been noted sporadically with the greatest number (17) located at the islands below Boone Dam on Patrick Henry Lake on 22 Dec. (WC). Canada Geese are rare in our area anytime so a flock of 25 noted flying over Patrick Henry Lake on 22 Dec. (WC) is worth mentioning.

Regular checks have again been initiated to follow the trends of waterfowl. The first record of Mallard (1) was on 10 Nov. with a buildup of numbers to 100 on 22 Dec. Black Ducks (8) were noted on 10 Nov. with an increase to 104 on 22 Dec. Gadwall seem to appear consistently in our area at the islands in Patrick Henry Lake below Boone Dam. The first noted (15) were on 10 Nov. One American Widgeon was found on 28 Sept., then none till thirty were found on 10 Nov. Their numbers ranged as high as forty on 23 Nov., dropped to fifteen on 30 Nov. and none being located since. Pintails are rare here with the following records noted: 16 Nov. (1), 23 Nov. (6), 27 Nov. (2), and 15 Dec. (1). Blue-winged Teal (32) noted only once on 29 Sept. Shoveler (4) only found once on 10 Nov. A single Wood Duck was sighted on 15 Dec. and one Redhead on 22 Dec. Redhead were also found on the Christmas Count. Ring-necked Ducks (8) first noted on 2 Oct. and have been recorded regularly since. Canvasback (3) only sighted on 22 Dec. Greater Scaup were found on the Christmas Count (ED). Lesser Scaup (8) noted on 10 Nov. and peaked (100) on 30 Nov. A single female Common Goldeneye has been sporadically recorded on Wilbur Lake since 14 Sept. Other migrant Goldeneyes (25) did not appear until 22 Dec. Our regular winter population of Bufflehead on Wilbur Lake started arriving 17 Nov. when three were found and have built up to a high count of 54 birds. A rare Oldsquaw was found on 22 Dec. (KHD & WC). Hooded Merganser (7) were first noted on 17 Nov. with scattered individuals being found since. Common Merganser (3) only recorded on 27 Nov.

The Turkey Vulture was last noted on 2 Nov. Hawks continue to be rare as noted by the following single records: Sharp-shinned 29 Sept. and 18 Dec., Cooper's 13 Oct., Red-tailed 22 Dec., Marsh 29 Sept., and Osprey on 15, 22, 29 Sept. and 12 Oct. Sparrow Hawks have been noted regularly since 29 Sept.

The first American Coot (1) was located on 2 Nov. and a high of seventeen found 16 Nov. then dropped to scattered numbers to 15 Dec. One Semipalmated Plover was identified on 29 Sept. One Common Snipe on 29 Sept. and very few since. Spotted Sandpipers were present till 15 Sept., Solitary Sandpipers (3) to 29 Sept. No Greater Yellowlegs were found this fall and no Lesser Yellowlegs after 15 Sept. Pectoral Sandpipers (1) last noted on 21 Sept. Least Sandpipers (4) were last recorded at the Roan Creek area on 21 Sept., and an unusual record of one on Boone Lake 30 Nov. (LRH & CS). A single Dunlin was recorded on Boone Lake the following dates: 16, 23, and 30 Nov. (KHD, LRH & CS). To date only one Herring Gull on 23 Nov. and Ring-billed Gulls only on the following dates: 16 Nov. (1), 23 Nov. (2), 30 Nov. (9) and 22 Dec. (16). Caspian Tern (2) were again found on 29 Sept. (KHD).

Most owls in our area appear to be uncommon, except for the Screech, so the following records of the Barred Owl are interesting: 21 Sept., 6 Nov. and 19 Dec.

Brown Creeper have been noted here since 3 Nov. Two Bewick's Wrens on 29 Sept. Hermit Thrush were found on 17 Nov. and single scattered records for the remainder of the season. A record of a Blue-gray Gnatcatcher on 27 Nov. at Boone Lake is very late (KHD & LRH). Golden-crowned Kinglets have been found in most pine stands since 29 Sept. Very few records of the Ruby-crowned Kinglet: 23 Sept. (1), 29 Sept. (3), 18 Dec. (1), 23 Dec. (2), and 29 Dec. (2). Only three records of the Water Pipet: 25 Sept. (3), 13 Oct. (1) and 3 Nov. (1).

Field work in regard to the Vireoes and Warblers has not been very intense and so there have not been any unusual records or numbers noted this past season.

The last Redwings (8) were observed on 25 Nov. and one Rusty on the Christmas Count (FWB). Common Grackles are more plentiful this year with flocks on 24 Dec. (150) and 25 Dec. (200). A few were also found on the Christmas Count. This past fall a huge number of blackbirds and Starlings used the pine stands of the Big Spring in Hampton for a roost.

Fred Behrend in an article elsewhere will elaborate on the invasion of northern birds into our area. In this writers opinion there have been very few Purple Finch with only the following records: 20 Oct. (2), 1 Dec. (3), 15 Dec. (1) and 11 on the Christmas Count. Pine Siskins have been relatively common this season with their being first recorded at lower elevation on 13 Oct. On the Christmas Count, 29 Dec., they were very common around Watauga Lake when over 200 were found. Eighteen Red Crossbills in the vicinity of Cove Ridge Dock in Butler were noteworthy additions to the Count.

Both the Savannah and Vesper Sparrows (ED) found on the Christmas Count were unusual. Fox Sparrows were first found on 13 Oct. and many scattered records since.

CONTRIBUTORS: K. H. Dubke. Fred W. Behrend, Lee R. Herndon, Ed Davidson, Charlie Smith, Wallace Coffey.

KENNETH H. DUBKE, 918 State Line Road, Elizabethton, Tennessee.

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# THE 1963 CHRISTMAS SEASON BIRD COUNTS

**By T.O.S. Members and Guests**

The thirty-third annual Christmas Season Bird Count tabulated in the following pages lists 115 species and subspecies. The number of species has been exceeded on six previous counts and equalled once. Fourteen counts are tabulated while three counts, for high altitudes only, are presented in paragraph form due to lack of space in the table. No new species was added to the list nor was there any species added by the high altitude lists that was not reported in the tabulated list.

The most unusual species for the count was the White-winged Crossbills which occurred in the Great Smoky Mountains and the Roan Mountain count by Fred Behrend. The birds in the latter case were on the North Carolina side of the mountain and were not observed in Tennessee. The first occurrence of this species was of two birds reported on the Memphis Christmas Count in 1954 (See MIGRANT: 25, 73, 74 and 79). The only other recorded occurrence of this species was of one and three birds in December 1955. (See Notes on the Birds of Great Smoky Mountains National Park — p. 195, 1963 by Arthur Stupka). The numbers of individuals was appreciably greater than previously observed.

Evening Grosbeaks occurred on three lists, indicating rather wide distribution and that a real invasion is on. Pine Siskins were more abundant than for many years. Bluebirds and Myrtle Warblers have increased by about one-third while Phoebes and Carolina Wrens are down about one-third from the 1962 counts.

## INFORMATION ON THE COUNTS

Information on the counts and the corresponding species lists in the table are given progressively from west to east. The locations for which the species are not tabulated, the species and numbers are given under the appropriate location under Information on the Count.

MEMPHIS. — About half 1953 areas; wooded bottomlands 35%, deciduous woods & city parks 37%, pastures, bare fields 15%, suburban roadsides 10%, river edge 3%. 22 Dec.; 7 a.m. to 4 p.m., negligible after 12 p.m. Snow started 7:15 a.m.; record 14 inches about dark; temp. 19° to 16°, wind 8-20 NE; 20 observers in 6 parties. Total party-hours 28 (24 on foot, 4 by car); total party-miles 79 (25 on foot, 54 by car). Turkey (BC), 1st Count record. Mr. and Mrs. Ben B. Coffey, Jr., Mrs. Ed. Carpenter, Mary Davant, Mrs. Henry Dinkelspiel, John H. Embury, Earl Fuller, Edward M. King, Charles McPherson, Nelle Moore, Mrs. Henry A. Schiller, Alice Smith, Dr. and Mrs. Arlo I. Smith, Lynn Smith, Ruth Stamm, Wendell L. and Bobby Whittemore, Mr. and Mrs. Chas E. Wilmeth. Also Mrs. Chas. Seahorn, Mrs. Paul C. Owen, and Mrs. C. E. Moore in their yards.

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REELFOOT LAKE. — All points within a 15-mile diameter circle, center Reelfoot Lake; lake 20%, marsh 5%, deciduous woods 45%, field and farm 18%, roadside 12%. 30 December; 7:30 a.m. to 4:30 p.m., partial overcast; temperature 10° to 27°; wind NW, 0-8 m.p.h.; 8 observers in 3 parties. Total party-hours 24 (4 on foot, 17 by car, 3 by boat); total party-miles 118 (8 on foot, 103 by car, 7 by boat).

Seen in area count period, but not on count day: Goldeneye Duck, Redhead Duck, Ruddy Duck.

Participants: Evelyn Cole, John R. Conder, John L. DeLime, W. L. Hall, Jr., Dr. Hunter M. Hancock, Edward Larson, Clell T. Peterson, William T. Sledd.

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JACKSON. — The count was made in the vicinity of Jackson in Madison County. 29 Dec.; weather conditions were unfavorable for water birds since ponds and lakes were frozen over although streams remained open. Even though early morning temperatures were around 20° the mid-day temperatures were in the thirties and forties and much more favorable for observation. (Seen in area during count period but not on count day — Red-headed Woodpecker).

MR. AND MRS. JOHN A. CHEEK II.

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NASHVILLE. — Approx. same area as in past 13 years; area of a 15 mile diam. circle centering on Harding, 7 mi. W of Nashville ct-h. Included were Radnor and Bush's lakes, deciduous wooded hills, 40%; open fields and pastures, 25%; river-bottom fields, 20%; roadsides and suburban yards, including 21 feeding stations, 15%. 28 Dec. 6:30 a.m. to 6 p.m. Temp. 27-35-29 above; wind westerly 8-12 mph; visibility good, sunny in p.m.; ground frozen and snow-covered since 8" fall of 22 Dec. and sub-freezing temperatures since. 29 observers in 9 parties. Party-hours 103 (52 on foot, 27 by car and 24 watching feeders). Party-miles, 158 (37 on foot, 121 by car). Total 79 species (about average); 26,090 individuals of which an estimated 20,000 were Starlings roosting on downtown buildings. 190 of the 523 Cardinals were reported from feeding stations. The Horned Grebe was on Cumberland river (J.S.H.). Geese and ducks on the lakes. Greater Scaups by M. W. and E. E. Peregrine Falcon seen on wing (B. H. A.). Barn Owls at 2 locations. Red-br. Nuthatch, Thrashers and Grackles were at feeding stations. Meadowlarks, seen by all parties, apparently unaffected by protracted snow. Robins were abnormally scarce. Seen within the count period but not on count day, Pied-billed Grebe, 1; Bufflehead, 1 and Rusty

# THE 1963 CHRISTMAS SEASON BIRD COUNTS

| Species | Memp. | Reelf. L. | Jack. | Nash. | Colum. | Leba. | Cook. | Chat. | Knox. | Smok. | Green. | Kings. | Bris. | Eliza. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Common Loon | ........ | 2 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 3 | ........ |
| Horned Grebe | ........ | ........ | ........ | 1 | ........ | ........ | ........ | 13 | 1 | ........ | ........ | ........ | 3 | 3 |
| Pied-billed Grebe | ........ | ........ | ........ | ........ | 2 | ........ | ........ | ........ | 2 | ........ | ........ | 5 | 4 | 3 |
| Great Blue Heron | ........ | 1 | ........ | 2 | 2 | 16 | ........ | 1 | 28 | 2 | ........ | 3 | 2 | ........ |
| Black-cr. Night Heron | ........ | ........ | ........ | 2 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Canada Goose | ........ | 10,000 | ........ | 2 | 10 | 23 | ........ | ........ | ........ | ........ | 12 | 1 | ........ | ........ |
| Hutchin's Goose | ........ | 125 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Snow Goose | ........ | 1 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Mallard | 3 | 80,000 | ........ | 99 | 14 | 7,500 | ........ | 16 | 70 | ........ | 6 | 7 | 10 | 11 |
| Black Duck | ........ | 1,700 | ........ | 30 | 4 | 3,200 | ........ | 61 | 52 | ........ | ........ | 3 | 16 | 3 |
| Gadwall | ........ | 7,200 | ........ | 8 | ........ | 200 | ........ | ........ | 5 | ........ | ........ | 2 | ........ | ........ |
| Pintail | ........ | 1,600 | ........ | ........ | ........ | 525 | ........ | ........ | 2 | ........ | ........ | 3 | ........ | ........ |
| Green-wing Teal | ........ | 350 | ........ | 5 | 2 | 16 | ........ | ........ | ........ | ........ | ........ | 15 | ........ | ........ |
| Am. Widgeon | ........ | 7,220 | ........ | 7 | ........ | ........ | ........ | ........ | 4 | ........ | ........ | 4 | ........ | ........ |
| Shoveler | ........ | 250 | ........ | 25 | ........ | 21 | ........ | ........ | 1 | ........ | ........ | ........ | ........ | ........ |
| Wood Duck | ........ | 1,000 | ........ | ........ | 20 | 38 | ........ | 1 | ........ | ........ | ........ | 2 | ........ | ........ |
| Redhead | ........ | ........ | ........ | 5 | ........ | 2 | ........ | ........ | ........ | ........ | ........ | 12 | ........ | 4 |
| Ring-nkd. Duck | 150 | 8,000 | ........ | 147 | ........ | 400 | ........ | ........ | 12 | ........ | ........ | 6 | ........ | 14 |
| Canvasback | ........ | 1 | ........ | 1 | ........ | ........ | ........ | 7 | ........ | ........ | ........ | 10 | ........ | ........ |
| Greater Scaup | ........ | ........ | ........ | 6 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 5 |
| Lesser Scaup | ........ | ........ | ........ | 77 | ........ | 500 | ........ | 8 | 20 | ........ | ........ | 10 | 5 | ........ |
| Com. Goldeneye | ........ | ........ | ........ | 1 | ........ | ........ | ........ | ........ | 13 | ........ | ........ | 7 | 12 | 5 |
| Bufflehead | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 4 | 2 | ........ | ........ | 2 | 12 | 15 |
| Ruddy Duck | ........ | ........ | ........ | 5 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 1 | ........ | ........ |
| Hooded Merganser | ........ | 6 | ........ | ........ | 1 | ........ | ........ | 10 | 38 | ........ | ........ | ........ | 6 | 7 |
| Common Merganser | ........ | ........ | ........ | ........ | ........ | 20 | ........ | ........ | 4 | ........ | ........ | ........ | 12 | ........ |
| Turkey Vulture | ........ | 2 | 4 | 1 | ........ | ........ | ........ | ........ | 1 | 1 | 18 | ........ | 9 | ........ |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Black Vulture | ........ | 34 | ........ | ........ | 17 | ........ | ........ | 3 | ........ | ........ | ........ | ........ | ........ | ........ |
| Sharp-sh. Hawk | ........ | ........ | ........ | ........ | ........ | 1 | ........ | ........ | 1 | ........ | ........ | ........ | ........ | ........ |
| Cooper's Hawk | ........ | ........ | ........ | 5 | ........ | 3 | 1 | 1 | 3 | 1 | 1 | ........ | 3 | 1 |
| Red-tail. Hawk | 5 | 15 | ........ | 22 | 4 | 3 | 2 | 7 | 3 | 2 | 6 | ........ | 1 | ........ |
| Red-shld. Hawk | ........ | 4 | ........ | 6 | 1 | 2 | ........ | 2 | 3 | ........ | ........ | ........ | 2 | ........ |
| Bald Eagle | ........ | 14 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Marsh Hawk | ........ | 4 | ........ | 3 | 1 | ........ | 1 | 1 | 1 | ........ | ........ | ........ | ........ | ........ |
| Peregrine Falcon | ........ | ........ | ........ | 1 | ........ | 1 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Sparrow Hawk | 4 | 7 | 2 | 32 | 4 | 3 | 5 | 6 | 15 | 3 | ........ | 1 | 8 | 2 |
| Ruffed Grouse | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 4 | ........ | 2 | ........ | 1 |
| Bobwhite | 54 | ........ | 24 | 25 | 15 | 14 | 13 | 22 | 46 | 8 | 23 | 15 | 24 | 1 |
| Turkey | 7 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Am. Coot | 1 | 6,000 | ........ | 76 | ........ | 60 | ........ | ........ | 2 | ........ | ........ | 6 | ........ | ........ |
| Killdeer | ........ | 2 | ........ | 24 | 2 | ........ | 2 | 19 | 37 | 4 | 2 | 3 | 12 | 6 |
| Com. Snipe | ........ | 3 | ........ | 1 | ........ | ........ | 1 | 14 | 34 | ........ | ........ | ........ | ........ | 6 |
| Herring Gull | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 2 | 5 | ........ | ........ | ........ | ........ | ........ |
| Ring-billed Gull | ........ | 1 | ........ | 7 | ........ | ........ | ........ | 26 | 155 | ........ | ........ | ........ | 6 | ........ |
| Mourning Dove | 7 | 18 | 13 | 145 | 52 | 420 | 162 | 181 | 655 | 79 | 162 | 23 | 130 | 6 |
| Barn Owl | ........ | ........ | ........ | 3 | ........ | ........ | ........ | ........ | 1 | ........ | ........ | ........ | ........ | ........ |
| Screech Owl | ........ | ........ | ........ | ........ | 1 | ........ | 4 | ........ | 1 | ........ | 1 | 1 | ........ | 1 |
| Great Horned Owl | ........ | 2 | ........ | 1 | 3 | 2 | ........ | ........ | 1 | ........ | 1 | ........ | ........ | 1 |
| Barred Owl | 1 | 2 | ........ | 2 | 2 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Belted Kingfisher | ........ | ........ | ........ | 8 | 3 | 2 | 2 | 5 | 15 | 4 | 3 | 1 | 3 | 6 |
| Yel.-sh. Flicker | 84 | 14 | 4 | 42 | 8 | 7 | 32 | 55 | 66 | 14 | 6 | 5 | 2 | 9 |
| Pileated Woodpecker | 2 | 3 | 2 | 22 | 4 | 2 | 7 | 5 | 20 | 12 | 9 | 8 | 5 | 7 |
| Red-bel. Woodpecker | 39 | 13 | 5 | 66 | 21 | 7 | 20 | 34 | 42 | 5 | 11 | 7 | 3 | 1 |
| Red-headed Woodpecker | 7 | 7 | ........ | ........ | ........ | 1 | 7 | 12 | 3 | ........ | 1 | 1 | ........ | ........ |
| Yel.-bel. Sapsucker | 22 | 1 | 2 | 12 | 7 | 3 | 9 | 14 | 39 | 16 | 5 | 1 | 1 | 3 |
| Hairy Woodpecker | 11 | 3 | 1 | 12 | 2 | 1 | 4 | 4 | 12 | 6 | ........ | 3 | ........ | 2 |
| Downy Woodpecker | 9 | 9 | 4 | 72 | 13 | 7 | 15 | 34 | 69 | 34 | 14 | 17 | 12 | 24 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eastern Phoebe | ........ | 1 | ........ | ........ | 2 | ........ | ........ | ........ | 1 | 2 | 5 | 1 | ........ | ........ |
| Horned Lark | 84 | 75 | 41 | 280 | 250 | ........ | 31 | 75 | 71 | 6 | 56 | ........ | 21 | 2 |
| Blue Jay | 158 | 26 | 72 | 109 | 11 | 24 | 175 | 215 | 293 | 85 | 64 | 123 | 52 | 35 |
| Com. Raven | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 5 | ........ | ........ | ........ | ........ |
| Com. Crow | 4 | 2,000 | 16 | 211 | 140 | 1,000 | 125 | 397 | 648 | 200 | 360 | 60 | 279 | 94 |
| Black-cap Chickadee | | | | | | | | | | ) 150 | | | | |
| Carolina Chickadee | 60 | 11 | 5 | 252 | 24 | 26 | 52 | 63 | 263 ) | | 55 | 50 | 30 | 60 |
| Tufted Titmouse | 22 | 17 | 31 | 188 | 20 | 37 | 61 | 169 | 168 | 110 | 31 | 69 | 20 | 29 |
| White-br. Nuthatch | 1 | 3 | 1 | 8 | ........ | ........ | 9 | 26 | 8 | 2 | ........ | 8 | 1 | 3 |
| Red-br. Nuthatch | ........ | ........ | ........ | 2 | ........ | ........ | ........ | 26 | 35 | 78 | 8 | 2 | 1 | 3 |
| Brown Creeper | 3 | 1 | ........ | 6 | ........ | ........ | 5 | 4 | 21 | 13 | 4 | 3 | 2 | ........ |
| Winter Wren | 2 | 2 | ........ | 2 | 3 | 1 | 7 | 4 | 5 | 12 | 1 | 3 | 1 | 2 |
| Bewick's Wren | ........ | 1 | ........ | 5 | ........ | 3 | 5 | 2 | 1 | ........ | 4 | ........ | ........ | 1 |
| Carolina Wren | 15 | 5 | 6 | 20 | 3 | 4 | 8 | 51 | 84 | 30 | 19 | 17 | 5 | 23 |
| Mockingbird | 26 | 25 | 17 | 135 | 5 | 5 | 20 | 123 | 224 | 10 | 23 | 33 | 30 | 17 |
| Brown Thrasher | 19 | 3 | 1 | 2 | ........ | 1 | 15 | 13 | 3 | ........ | ........ | 3 | ........ | ........ |
| Robin | 28 | 3 | 3 | 162 | 1,510 | 10 | 4 | 145 | 118 | 13 | 1 | 4 | ........ | 1 |
| Hermit Thrush | 14 | 5 | 1 | 2 | 2 | ........ | 2 | 2 | 6 | 19 | ........ | ........ | ........ | 2 |
| E. Bluebird | 2 | 4 | 22 | 68 | 16 | 6 | 17 | 36 | 12 | 80 | 18 | 2 | ........ | 12 |
| Go.-cr. Kinglet | 3 | 1 | 4 | ........ | ........ | ........ | ........ | 6 | 52 | 54 | 6 | 15 | 4 | 3 |
| Ruby-cr. Kinglet | 1 | ........ | ........ | 2 | ........ | ........ | ........ | 25 | 16 | 25 | 1 | ........ | 1 | 2 |
| Water Pipit | ........ | ........ | ........ | 18 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Cedar Waxwing | 10 | ........ | ........ | 50 | 53 | 1 | 24 | 191 | 113 | 14 | 20 | 13 | ........ | 6 |
| Log.-hd. Shrike | ........ | 3 | 7 | 16 | 3 | 1 | 8 | 7 | 12 | 3 | 7 | 1 | 5 | 2 |
| Starling | 4,400 | 900,000 | 25,000 | 20,000 | 6,000 | 1,000 | 761 | 1,771 | 10,245 | 210 | 1,094 | 100 | 1,093 | 3,676 |
| Orange-cr. Warbler | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 1 | ........ | ........ | ........ | ........ | ........ | ........ |
| Myrtle Warbler | 40 | ........ | ........ | 6 | 3 | ........ | 5 | 108 | 142 | 60 | 13 | 8 | ........ | 31 |
| Pine Warbler | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 2 | ........ | ........ | ........ | ........ | ........ |
| Palm Warbler | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 1 | 1 | 15 | 1 | ........ | ........ | ........ |
| House Sparrow | 51 | 500 | 40 | 200 | 54 | 40 | 135 | 358 | 298 | 180 | 94 | 147 | 134 | 135 |
| E. Meadowlark | 75 | 49 | 150 | 419 | 125 | 38 | 150 | 188 | 211 | 125 | 219 | 31 | 107 | 49 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Redwing Blackbird | 8,140 | 1,350,000 | 2,000 | 247 | 210 | ........ | 10 | 579 | 74 | 2 | 2 | 3 | ........ | ........ |
| Baltimore Oriole | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 1 | ........ | ........ |
| Rusty Blackbird | ........ | ........ | ........ | ........ | 225 | ........ | 2 | 14 | 36 | 6 | ........ | ........ | 5 | 1 |
| Com. Grackle | 7,400 | 630,000 | 10,000 | 4 | 30 | ........ | 178 | 120 | 120 | ........ | 5 | ........ | 1,030 | 103 |
| Brown-hd. Cowbird | 25 | 450,000 | 6 | 1 | 150 | ........ | 35 | 1 | 15 | ........ | ........ | ........ | 13 | ........ |
| Cardinal | 255 | 110 | 63 | 523 | 60 | 50 | 135 | 237 | 385 | 70 | 104 | 140 | 144 | 79 |
| Evening Grosbeak | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 72 | ........ | ........ | ........ | 1 |
| Purple Finch | 5 | ........ | ........ | 11 | ........ | 2 | 24 | 93 | 103 | 85 | 7 | 19 | 1 | 11 |
| Pine Siskin | 52 | ........ | ........ | ........ | ........ | ........ | ........ | 4 | 136 | 2,800 | ........ | 40 | 94 | 216 |
| Am. Goldfinch | 68 | 14 | 6 | 226 | 11 | ........ | 53 | 340 | 497 | 60 | 69 | 32 | 55 | 95 |
| Red Crossbill | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 89 | ........ | ........ | ........ | 18 |
| White-wing Crossbill | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 15 | ........ | ........ | ........ | ........ |
| Rufous-sd. Towhee | 36 | 3 | 23 | 112 | 20 | 5 | 68 | 118 | 159 | 11 | 8 | 53 | 6 | 27 |
| Savannah Sparrow | 44 | 10 | ........ | 34 | 55 | 1 | ........ | 11 | 7 | ........ | 7 | ........ | ........ | 2 |
| LeConte's Sparrow | 2 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Vesper Sparrow | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 4 | ........ | ........ | ........ | ........ | ........ | 1 |
| Lark Sparrow | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 1 | ........ | ........ | ........ | ........ | ........ |
| Slate col. Junco | 741 | 150 | 100 | 773 | 35 | 22 | 184 | 221 | 665 | 292 | 90 | 176 | 190 | 166 |
| Tree Sparrow | ........ | 1 | ........ | 2 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Chipping Sparrow | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 2 | ........ | ........ | ........ | ........ | ........ | ........ |
| Field Sparrow | 90 | 50 | 7 | 270 | 12 | ........ | 64 | 433 | 283 | 100 | 6 | 30 | 50 | 36 |
| White-cr. Sparrow | 3 | 1 | 3 | 43 | 5 | 15 | 10 | 3 | 89 | ........ | 38 | 3 | 7 | 10 |
| White-thr. Sparrow | 1,266 | 53 | 115 | 271 | 84 | 7 | 76 | 237 | 743 | 190 | 75 | 100 | 53 | 74 |
| Fox Sparrow | 44 | 12 | ........ | 38 | 4 | 1 | 12 | 5 | 11 | 6 | 2 | 2 | 1 | 5 |
| Lincoln's Sparrow | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 1 | ........ | ........ | ........ | ........ | ........ | ........ |
| Swamp Sparrow | 56 | 37 | ........ | 172 | 30 | ........ | 2 | 75 | 29 | 13 | 6 | ........ | ........ | 7 |
| Song Sparrow | 111 | 55 | 68 | 191 | 38 | ........ | 24 | 194 | 317 | 157 | 55 | 25 | 106 | 54 |
| **SPECIES** | **54** | **73** | **38** | **79** | **59** | **56** | **53** | **77** | **86** | **58** | **54** | **66** | **56** | **66** |
| **Individuals** | 23,872 | 3,456,845 | 37,868 | 22,991 | 9,408 | 15,298 | 2,925 | 7,259 | 18,593 | 5,664 | 2,859 | 1,503 | 3,835 | 5,211 |

Blackbird, 5. Field observers were Mr. and Mrs. B. H. Abernathy, Mrs. Wm. F. Bell, Mike Bierly, Larry Copes, Annella Creech, S. Tennison Dillon, Milbrey Dugger, John O. Ellis, Mrs. Erline Elmore, Charles Farrell, Albert F. Ganier (retiring as compiler, after 50 years), Paul Green, Katherine Goodpasture, Mr. and Mrs. John S. Herbert, Virginia Hagen, Marguerite McKinney, Geo. R. Mayfield, Jr., Henry E. Parmer, Jimmy Parrish, Mr. and Mrs. Wm. A. Puryear, Jennie Riggs, Mr. and Mrs. Kirby Stringer, Paul Stumpf, Lawrence O. Trabue and Mary Wood. Mrs. Kirby Stringer compiled the list of 41 species observed by other members watching their feeding stations and home grounds. These were, O. C. Ault, Mrs. W. F. Bell, Jr., Mrs. Bergstrom, Mrs. B. E. Britt, Jr., Merrill Carter, Mrs. Don Cassel, Mrs. Chas. Cornelius, Sr., Mrs. Watson Crockett, Mrs. K. B. Everly, Mrs. R. E. Faitoute, Mr. and Mrs. Wm. E. Fentress, Mrs. W. C. Finch, Mary Frazer, Hugh L. Fry, A. Ben Grose, Louise Jackson, Mrs. Herman Knauth, Mrs. R. E. Lynn, Mr. and Mrs. Harvey McClanahan, Mrs. Greer Ricketson, Mr. and Mrs. Max Schuerman, Jesse Wills.

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COLUMBIA. — 31 Dec. overcast; 18° to 28°; five observers.

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LEBANON. — Our Christmas count, conducted on 30 December, took the form of watching from ten selected locations rather than of the customary tramps. The number of species observed is, we believe, about what it would have been by the other method but the number of individuals (except in the case of ducks and geese), is considerably less.

The result is notable, not for anything else, but for some things that could not be found, especially shore birds and owls. Despite an all night vigil in a location which ordinarily yields at least three species and from which the Great Horned has not been absent for sixty years, not only the Great Horned nor an owl of any kind was heard. Not a Killdeer was found on any of half a dozen locations where they are ordinarily common. The latter we attribute to the coincidence of a long freeze and a continuing drought. Springs and small streams are not running sufficiently to prevent freezing and there is no open water feeding ground. For the absence — or persistent silence — of Great Horned, Barn, Barred and Screech Owls we have no explanation.

All waterfowl, like most of the Crows and Mourning Doves, were seen on the Lock Five refuge of the Tennessee Game and Fish Commission on Old Hickory Lake. Except for a notable increase in the number of wintering Great Blue Herons, the number of all species is about what was to be expected.

Of the twelve observers, eight worked alone, the others in pairs. Compiler: Dixon Merritt.

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COOKEVILLE. — Territory covered is approximately the same as that covered in the last four counts. However, new subdivisions and extensive additions to sewers have changed the nature of the woods of our suburbs.

Habitats: lakes and swamps 20%; fields 35%; woods 30%; vacant lots, Tech Campus 5%; roadsides, streets and town square 10%. Count day, 28 Dec. 7:30 a.m. to 4:30 p.m., temperature 28 - 35°; wind 0-12 m.p.h.; overcast until noon. Total party hours, 75 (60 by car, 15 on foot); total party-miles 475 (455 by car, 20 on foot). Some "on foot" watching bird feeders. Sixteen observers, in 11 parties.

Observers: Dr. Claude Bruce, Dr. J. O. Cummins, Mrs. Caprice Haile, Jim Haile, Dr. and Mrs. Sidney McGee, Mrs. Lee Medley, Dr. J. T. Moore, Johnny Moore, Mrs. Constance Peterson, Miser Richmond, Miss Chrissa Wendt, Miss Marie White, Mrs. Milo Williams. P. L. Hollister, (compiler).

CHATTANOOGA. — All points within a 15-mile diameter circle, center National Cemetery in city; fields and pastures 35%, woodlands 20%, ponds and lakes 15%, creeks and rivers 15%, roadside 10%, and residential 5%. 29 Dec.; 4:00 a.m. - 5 p.m. Clear, temp. 24 to 44 degrees; wind N, 5-10 m.p.h.; 21 observers in 7 parties. Total party hours, 58 (41 on foot, 17 by car); total party miles 259 (30 on foot, 229 by car). One new specie reported for the first time on the Chattanooga count: Orange-cr. Warbler (Benton Basham & Prof. E. O. Grundset) field marks and actions of warbler seen with ease for 15 minutes at distances of 15-35 feet under good lighting conditions. Two species seen on the 1962 count were again counted and confirmed for this Christmas count; (Lincoln's Sparrow, West party and the Palm Warbler, Basham party.)

Mr. and Mrs. T. S. Barr, Benton Basham, Ralph T. Bullard, Jr. (compiler), Mrs. R. T. Bullard, Jr., Gladys Conner, Mrs. Leon F. Cross, Mrs. H. W. Crownover, Mrs. Victor Divver, Mrs. W. L. Fenn, E. O. Grundset, Catherine Kellerman, Kurt W. Krause, Mike Mantooth, Mr. and Mrs. Howard Meadors, Mrs. C. F. Prestridge, Mr. and Mrs. Eugene Ranger, Mr. T. L. Rogers, Mrs. J. W. Thompson, Mrs. Douglas Tunsberg, Mr. and Mrs. E. M. West.

KNOXVILLE. — All points within a 15-mile diameter circle, center at Oak Ridge Highway and Ball Camp Pike; roadsides 22%, brushy fields and pastures 22%, deciduous woods 18%, cemeteries, city parks, and suburbs 17%, ponds and lakes 10%, open and cultivated fields 7%, pine woods 4%. 22 December, 6:30 a.m. to 5:30 p.m. Clear a.m., cloudy p.m.; temperature 21° to 38°; wind NE, 0-10 m.p.h., ground frozen, most waters frozen. Twenty-two observers in 14 parties. Total party hours, 116 (98 on foot, 18 by car); total party miles, 444 (77 on foot, 367 by car). Twelve species of duck, a Coot, and two species of Grebe, along with two species of irregular northern visitors — Pine Siskin and Red-breasted Nuthatch — helped boost the count to the highest ever found here on a winter count. Most unusual on the list is a Lark Sparrow, which has been a regular visitor at the feeding station of Maxie Swindell since October. Two Pine Warblers were also found by Maxie, and a Palm Warbler and Marsh Hawk by Beth Lacy. Better-than-usual coverage also helped obtain the 86 species. Jim Campbell, Danny Ellis, John Elson, Mary Enloe (compiler), H. C. Garlinghouse, Quincey Gorman, David Highbaugh, Joseph C. Howell, Beth Lacy, Laura Beth Lacy, Charles Loveday, Mr. and Mrs. J. T. Mengel, Mr. and Mrs. R. A. Monroe, Holly Overton, Paul S. Pardue, Tom Pardue, Maxie Swindell, James T. Tanner, Mr. and Mrs. George Wood.

GREAT SMOKY MOUNTAINS NATIONAL PARK, TENN. - N. C. — (Localities are within a 15-mile diameter circle centered on Bull Head of Mt. LeConte — same general areas as the 1937-1956 counts).

29 December, 1963. 7:30 a.m. to 5:00 p.m. Clear; temperature range 14°-40°; wind 1-15 m.p.h.; ground snow-covered, from patches (lowlands) to 10 inches in high altitudes.

Nineteen observers in 9 parties. Total party-hours 66 (51 on foot, 15 by car); total party-miles 206 (56 on foot, 150 by car).

Vernon R. Bender, Jr., Carlos C. Campbell, James M. Campbell, Donald Defoe, John Elson, Mary Enloe, Mr. and Mrs. H. C. Garlinghouse, David Highbaugh, Philip Huff, Mr. and Mrs. Robert A. Monroe, Paul S. Pardue, Mr. and Mrs. Arthur Stupka, (Compiler), Dr. and Mrs. James T. Tanner, Mr. and Mrs. George R. Wood, (Tennessee Ornithological Society, National Park Service and guests).

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EASTERN SMOKY MOUNTAINS. — Start at Cosby Recreation Area to Low Gap on Appalachian Trail along trail to Inadu Knob to Cosby Camp Ground by Rock Creek Trail; evergreen woods 40%, mixed woods 60%. 5 Jan. 1964; 7:30 a.m. to 5:30 p.m. Cloudy to clear, snow up to 21 inches deep on the trail; temp. 25 to 45 degrees; wind 2 m.p.h. One observer. Total party-hours, 10; total party-miles 13 all on foot. Richard Nevius (compiler).

Ruffed Grouse, 6; Yellow-bellied Sapsucker, 4; Hairy Woodpecker, 3; Downy Woodpecker, 8; E. Phoebe, 1; Blue Jay, 9; Common Raven, 1; Crow, 3; Black-capped and Carolina Chickadee, 45; Red-breasted Nuthatch, 9; Brown Creeper, 3; Robin, 2; Purple Finch, 10; Pine Siskin, 112 and Slate-colored Junco, 31. Total Species — 15; total individuals — 247.

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GREENEVILLE. — All points within a 15-mile diameter circle, center Mt. Pleasant Church, to include Lick Creek, Roaring Fork, Davy Crocket Lake, Nolichucky River, Paint Creek, Albany, Tusculum, and Greeneville; woodland 50% (deciduous with small patches of pines and cedars), open fields and pastures 45% (includes ponds and lakes), towns 5%. 27 Dec.; 6:50 a.m. to 5:30 p.m. cloudy to partly cloudy; temp. 34 degrees; wind from 0 to 20 m.p.h. 10 observers in 7 parties. Total party-hours, 20 (19 on foot, 1 by car); total party-miles, 50 (13 on foot, 37 by car). Seen in the area during count period but not on count day: Great Blue Heron, Wood Duck and Black Vulture. Mrs. Turner Clinard, Mrs. Chester Darnell, Mrs. Marion Edens, Mr. and Mrs. King Gaut, Mr. and Mrs. William Hollomon, Mrs. Wilma Irvine, Mrs. Richard Nevius, Richard Nevius (compiler).

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BIG BALD MOUNTAIN, Tenn. - N. C. from East Fork Higgins Creek to summit of Big Bald, 3500-5516 ft.; deciduous woodlands 70%, grassy treeless area on top of Big Bald 30%. 22 Dec. 1963; 8:00 a.m. to 6:00 p.m. Clear to overcast; temp. 18 to 32 degrees; wind SE 1-10 m.p.h., 2-6 in. snow with drifts deeper. Two observers in one party (all on foot); total party-miles, 15 (all on foot).

Pileated Woodpecker, 1; Hairy Woodpecker, 2; Downy Woodpecker, 1; Northern Horned Lark, 5; Blue Jay, 3; Raven, 1; Chickadee, 1; Titmouse, 1; White-breasted Nuthatch, 8; Goldfinch, 1; Junco, 8. TOTAL, 11 species, 32 individuals.

John Barnitz, Rt. 3, Erwin; Fred Behrend, 607 Range St., Elizabethton (compiler).

KINGSPORT. — 28 Dec.; 7:15 a.m. to 5:30 p.m.; heavy fog to 10:00 a.m., clearing, ground covered with 6" to 8" of snow; 22° to 40°; open water except on Bays Mountain. Seen in area during count period but not on count day — Shoveler, Turkey Vulture, Black Vulture, American Woodcock, Herring Gull, Ring-billed Gull, Horned Lark and Evening Grosbeak. The Green-winged Teal were seen on Holston River below Holston Ordnance. One was shot by a hunter, so identification was certain. The Redwinged Blackbirds have not appeared on our Christmas census previously. The Baltimore Oriole (M) has patronized Mrs. Fred Kays' feeder for some time. Joseph and Thomas Finucane, W. E. Gift, Mrs. Fred Kays, Mrs. William McGee, Vincent Quinn, Mrs. Lucile Smith, Robert M. Switzer, Jr., Mrs. Robert M. Switzer (compiler) and Howard S. Young.

BRISTOL, TENN.-VA. — (All points within a 15-mile diameter circle, center at junction of U. S. 11 and Va. Route 625, to include Bristol, Stone Mill Marsh, South Holston Lake and River; fields and farmland 40%, mixed deciduous forest 25%, lake and river 15%, town and residence 10%, misc. 10%). — 28 Dec.; 7:00 a.m. to 6:30 p.m. Partly cloudy, heavy fog in a.m.; temp. 22° to 36°; wind W, 10 m.p.h.; heavy snow on ground, most waters partially open. Nine observers in 6 parties. Total party-hours, 26 (13 on foot, 13 by car); total party-miles, 168 (8 on foot, 160 by car). (Seen in area count period, but not on count day: Canada Goose, Canvasback, Bald Eagle, Red-headed Woodpecker, Water Pipit.) — Judith A. Abbott, Fletcher R. Bingham (co-compiler), F. Rockwell Bingham, Rosemary R. Bingham, John Wallace Coffey (co-compiler), Robert H. Quillen, Enno van Gelder, Roger van Gelder, Henry Woodward.

ELIZABETHTON. — All points within a 15-mile diameter circle with center at Wilbur Dam. 29 Dec.; 6:30 a.m. to 6:00 p.m. Overcast to clear; Temp. 14° to 30°. Eight observers in five parties. Total party-hours, 38 (32 on foot, 6 by car); total party-miles 112 (23 on foot, 89 by car). Mr. and Mrs. John Barnitz, Fred W. Behrend, J. C. Browning, Ed Davidson, Kenneth Dubke, Roby D. May, Jr. and Grace Rowe. (Compiler Lee R. Herndon).

ROAN MOUNTAIN. — Carver's Gap - Round Bald - Carver's Gap - Balsam Road - Gardens - return to Carver's Gap by way of paved road. Elevation 5,500-6,200 feet; coniferous forest 70%, grassbald 20% and briar-rhododendron-alder 10%. 20 Dec.: 8:00 a.m. to 5:00 p.m. Clear, distant haze; temp. 4° to 18°; wind NW, 5-25 m.p.h.; from broken cover of snow on bald to 15 inches in Gardens. One observer. Total hours, 9; total miles 9, all on foot. Ruffed Grouse, 1; Blue Jay, 2; Common Raven, 2; Common Crow, 35; Chickadee (Sp.?), 1; Red-breasted Nuthatch, 23; Cedar Waxwing, 1; Evening Grosbeak, 8; Pine Siskin, 55; Red Crossbill, 2; White-winged Crossbill, 88; Carolina Junco, 7. Total species, 12; total individuals, 225. Fred W. Behrend.

# ROUND TABLE NOTES

THE FIRST NASHVILLE CHRISTMAS CENSUS. — Since the 1963 census was my 50th at Nashville, it might be of interest to publish the first one. The date was 26 Dec. 1914, about 10 months prior to the founding of the T. O. S. The count was made by me alone for at that time I did not know of anyone else at Nashville who was likewise interested. My original listing card says that although the sky was clear, it was bitter cold, the thermometer reading 14 to 26 above, a north wind, the ground frozen and covered with a light snow. I took the train to Harding 7 miles west, got off at 7:30 a.m. and walked cross-country eastward to the Overton hills and Glendale, boarding the street car there in late p.m. following the 10 mile hike. The 30 species listed on my card were as follows: — Black Vulture, 8; Turkey Vulture, 1; Red-tailed Hawk, 2; Sparrow Hawk, 3; Bobwhite, 12; Kildeer, 26; Mourning Dove, 28; Flicker, 7; Red-bellied Woodpecker, 2; Yellow-bellied Sapsucker, 3; Downy Woodpecker, 3; Horned Lark, 312; Common Crow, 25; Carolina Chickadee, 10; Tufted Titmouse, 3; White-breasted Nuthatch, 1; Bewick's Wren, 1; Carolina Wren, 6; Mockingbird, 10; Bluebird, 5; Ruby-crowned Kinglet, 1; House Sparrow, 100; Meadowlark, 127; Cardinal, 17; Towhee, 5; Savannah Sparrow, 7; Field Sparrow, 60; White-throated Sparrow, 5; Swamp Sparrow, 3; and Song Sparrow, 60. Six birds were secured with my 410 gun, for the purpose of preparing study skins. The list was sent to **Bird Lore** for publication but thru some mishandling, did not appear in print. A year later, a similar list, made by A. C. Webb and myself, was published as were others in the years that followed.

ALBERT F. GANIER, 2112 Woodlawn Dr., Nashville 12.

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WHITE-WINGED CROSSBILLS IN GREAT SMOKY MOUNTAINS NATIONAL PARK. This note is to record the occurrence of White-winged Crossbills *(Loxia leucoptera)* in the vicinity of Newfound Gap, Great Smoky Mountains National Park, on three consecutive days in late December, 1963. On 28 December Park Ranger Larry E. Hanneman observed four of these birds feeding on the ground with a small flock of Evening Grosbeaks close to US 441 at a point approximately one-half-mile below Newfound Gap (Tenn. side). Hanneman who comes from Wisconsin where he was familiar with White-winged Crossbills stated that the birds were approximately 50 ft. away and that two of the four were rosy-pink males. The other two lacked the rosy-pink color but were of the same size and had the same broad white wing-bars. Next day, 29 December, Mr. and Mrs. George R. Wood (Knoxville, Tenn.) while engaged in taking the annual one-day count of winter birds in the park counted 15 White-winged Crossbills within a few hundred yards of Newfound Gap — just across on the North Carolina side. On 30 December, Park Naturalist Henry W. Lix while driving up to Newfound Gap, noted two male White-winged Crossbills close to where Ranger Hanneman had observed these birds two days previously. Mr. Lix reported viewing the birds at close range while they perched in some pin cherry trees close to the transmountain road; the distinctive rosy-red color and the prominent white wing bars were seen to good advantage.

The only previous records of White-winged Crossbills in Great Smoky Mountains National Park are mentioned in my **Notes on the Birds of Great Smoky Mountains National Park** (1963); the account reads as follows:

"Two observations, both made at Newfound Gap (5040 ft.) in December 1955, represent the sum total of our records for the White-winged Crossbill. Lix, using binoculars, watched one of these birds at a distance of 40-50 ft. on December 6. It was with a flock of Red Crossbills. Liles (James E.), on December 24, reported three birds in the same area."

ARTHUR STUPKA, Great Smoky Mountains National Park, Headquarters, Gatlinburg.

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GOSHAWK NEAR GREAT SMOKY MOUNTAINS NATIONAL PARK. — The first record of a Goshawk *(Accipiter gentilis atricapillus)* for the vicinity of Great Smoky Mountains National Park was established 19 December, 1963 when one of these birds was shot by Walter A. McCarter at his home in the Glades community — approximately two miles northeast of Gatlinburg, Tennessee and approximately one mile north of the Great Smoky Mountains National Park. The big hawk, an adult in the blue-gray plumage, had been harassing poultry at the McCarter property. The specimen was donated to the National Park.

According to articles published in **The Migrant**, a listing of which was kindly prepared for me by Dr. Lee R. Herndon, there are four records of the Goshawk for the region of Nashville, Tennessee, and vicinity:

1) October 19, 1918 (Ganier, 1937)
2) December 13, 1939 (Ganier, 1940)
3) March 19, 1941 (Laskey, 1941)
4) January, 1946 (Schreiber, 1945)

In addition, Dr. Herndon in his account of the birds of Carter County, Tennessee (1950) gives the following records of this large hawk for Elizabethton and vicinity:

1) October 1, 1944
2) September 28, 1947
3) September 25, 1948.

There appear to be no other Tennessee records of this rare visitor from the north. The latest revision of Pearson, Brimley and Brimley "Birds of North Carolina" (1959) gives no records of the Goshawk for that state.

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ARTHUR STUPKA, Great Smoky Mountains National Park, Headquarters, Gatlinburg.

MID-SOUTH WHIP-POOR-WILL DISTRIBUTION RUNS - 1963.— Ducks and the O. Y. Conders each heard a Whip on 31 Mar. B. B. Cooper, while in the Grenada, Miss. area, heard his first, a.m. 30 Mar. Migration in Overton Park only fair. At two places NNW of Dyersburg (Obion R. bluff) and in a woods W/S the Spillway, Reelfoot, a Whip was heard 3 May. Possibly late transients; two trips to record them on later dates were failures; on a third try we didn't even get out of town, — all because of stormy weather. Whips still fairly common, Huntington-Reagan, Cedar Grove-Cub Lake areas, Tenn., 18/19 June. Three attempts at a Shelby County record produced none, the nearest being near Williston (8 May & 7 June).

Working the southern limits: On 11 May just inside Attala County, Miss. from Vaiden, we heard a Whip, first for that Hwy. 35 stretch, then later I found the one in SW Winston County (4th season), my farthest south summer bird. Ouachita low elevation valley highways worked 8/9 June, — Perryville W. on Ark. 60 to Ark. 27, Danville, Magazine, Paris, New Blaine. No Whips heard just W. of Perryville (as in 1962) but one each at 3 or 4 stops going into Fourche Jct. West from there and new route: one at 5 miles (in Carter Cove) and one, 4.7 miles E. of Magazine. None on Petit Jean S. P. Mtn. 3/4 July. Working western limits of the Whip's summer range, Mrs. Coffey and I tried Miami, Okla, — Siloam Springs and (7 July a.m.) the Stillwell, Okla., area. Chucks called fairly well nights but those Whips I spotted, only called just before dawn. Early 5 July along US 59, 3 heard (2 stops) in area 11 miles and 2 in area 7 miles W. of Siloam Springs. Rechecked — no calling dusk 5 July at first stop; calling predawn 6 July at last stop.

BEN B. COFFEY, JR., 672 N. Belvedere, Memphis 7, Tenn.

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RED PHALAROPE IN GREENE COUNTY. — The Red Phalarope *(Phalaropus fulicarius)* is primarily a coastal transient and maritime species during the winter, therefore an inland occurrence, especially in the spring, should be noted. On 28 April, 1963, while taking the annual spring census in Greene County we stopped to count Sandpipers around a small pond in a barnyard close to the road, not more than 25 feet away. We were surprised to see one of the birds swimming and turning in small circles. For the next 15 minutes we watched closely from a distance of about 10 feet. We were in an automobile and apparently our presence did not disturb the birds. The head was dark over the top, a white patch around the eye, the larger amount more behind the eye, a slight dark or dusky streak through the eye. The nape was yellowish-brown and the back a mottled brown. What little we saw of the legs was yellowish, and the bill was flat, short and heavy and appeared to be a little lighter in color near the base. When we tried to leave the car to see more the birds, there were two, flew. We consulted Peterson's **Field Guide to the Birds** and Audabon's **The Birds of America.**

Other mention of Phalaropes in Tennessee and nearby places have been made on 17 Dec., 1944, one dead Red Phalarope near the Park headquarters building (MIGRANT **15,** 69-71, 73, 1944); one Red Phalarope on 1 Oct., 1949 on Fontana Reservoir (NOTES ON THE BIRDS OF GREAT SMOKY MOUNTAINS NATIONAL PARK — STUPKA p. 63); two Northern Phalaropes on 21 Oct., 1959 on Bush Lake (MIGRANT **30,** 55, 1959); 29 Nov., 1959 one Red Phalarope found dead under the power lines leading into the Aluminum Company at Maryville (MIGRANT 30, 56, 1959); another case of the presence of a Phalarope in Tennessee was on 1 Nov., 1959 at Long Savannah flats near Chattanooga, because of disagreement as to species name this bird was not identified (MIGRANT 30, 55, 1959). In May of 1955 another Phalarope was seen in Greene County, but as in the case of the Chattanooga bird, no species identification was made. The two Greene County occurrences were in the spring following severe storms along the Atlantic coast with winds blowing inland.

MRS. WILLIS CLEMENS, Greeneville.

WINTER VISITANTS. — A remarkable influx of northern birds at early dates made bird observation in contrast to the previous winter very interesting during the present cold weather season.

Flocks of Pine Siskins, up to 30 or 40 in the average, were noted as early as 13 Oct. at 5,700-6,000 ft. elevation in the coniferous forest in the Balsam Road vicinity.

Evening Grosbeaks, in flocks of about 30 and small size, were first heard and seen 3 Nov. and have been observed regularly since.

A pair of Purple Finches were seen feeding in a balsam tree at 5,500 Ft. 20 Oct.

Red Crossbills were heard but not seen 17 Nov. and 20 Dec., one on the first date, two on the latter.

An abundant crop of balsam seeds accounted for the presence of a large number of Red-breasted Nuthatches, a species the year around on Roan Mt.

The most interesting find was that of White-winged Crossbills, for the first time, on Roan Mt. at elevation 5,500-6,000 ft. They were observed only on the Carolina side. A total of 88 was listed in several flocks and individuals on my Christmas Bird Count 20 Dec.

FRED W. BEHREND, 607 Range St., Elizabethton.

SANDHILL CRANES IN BLOUNT COUNTY.—On 8 December 1962 Mr. and Mrs. Merritt C. Farrar, Mrs. Jim Campbell and the writer were driving towards the Great Smoky Mountains National Park on State Highway 73 in Blount County when a group of birds a great distance away were observed flying towards us. Our first opinion was that the birds were Canada Geese since they were flying in a V formation, but upon getting out of the car we all quickly noticed their long legs were trailing behind and Mr. Farrar was the first to notice the birds outstretched necks. The poor light conditions at the time precluded any color determination but the straight long necks, long trailing legs, straight long bills, and large overall size made a conclusive identification of Sandhill Cranes *(Grus canadensis).*

This group, which numbered thirteen, is not the largest to be reported in the state. A check of the past issues of THE MIGRANT found a few articles telling of other large flights observed in East Tennessee, but it would appear that such observations were infrequent enough to arouse plenty of excitement for the viewer.

When last seen, the Cranes were flying across Chilhowee Mountain in a southwesterly direction which would have taken them across (or in, if they came down) the Great Smoky Mountains National Park if the flight continued in the same direction as we last observed.

The writer was keenly disappointed in not being able to follow the Cranes long enough to determine if they did cross the Park boundary (a map check showed that at the last flight direction seen the Cranes would have crossed a portion of the Park) since Arthur Stupka's NOTES ON THE BIRDS OF GREAT SMOKY MOUNTAINS NATIONAL PARK published in 1963 does not list a single observation of the Sandhill Crane.

JAMES M. CAMPBELL, 15 Hedgewood Drive, Knoxville 18, Tennessee.

BROWN-HEADED NUTHATCH IN CHICKAMAUGA PARK, GA.—The Brown-headed Nuthatch *(Sitta pusilla)* was seen 4 January 1963 in Chickamauga Park, several miles south of the Tennessee line. It was in a mixed pine and hardwood forest on the edge of a large field (Brock Field) in the park. My attention was drawn to it by the distinctive call notes which were remembered from past experience in South Carolina. I also got an excellent view of it in good light. That section of the park has a lot of pine but oddly enough we haven't come upon it in the past though work has been done in the area often in the search for the Red-cockaded Woodpecker.

The next day, Carol and Stan Barr went into the same area and located the bird again. The Wests checked the area later but were unable to find the bird.

ROCK L. COMSTOCK, JR., 806 Penola Drive, Richmond, Virginia.

## MRS. ROBERT J. DUNBAR 4-11-1900 to 12-7-1963.

The death of Clara Dunbar on December seventh was a great personal loss to me and to her many friends. Clara had a rare combination of warmth and quiet dignity, and a quick responsiveness which bridged gaps of time and distance.

Her friends in T. O. S. will remember her as a delightful companion and an accurate bird observer with keen eyes and ears. Though Clara did not like organizations her interest in birds prompted her to do any amount of work for T. O. S. because it helped the cause of ornithology. Her enthusiasm carried over to many friends who had never noticed birds before.

In our grief at losing Clara many of us will look back with appreciation over the years of her companionship, and be glad to remember that her cheerful and unselfish spirit remained up to the last.

MURIEL B. MONROE, 1424 Tugaloo Drive, Knoxville 19.

Whooping Crane news.—We are all interested in the survival story of these big birds which winter on the Texas Gulf coast and have read with interest an Associated Press story from northwest Canada (their breeding ground) that "the world population of wild Whooping Cranes has increased by three — to 31. The Canadian Wildlife Service reports that three fledglings, including twins, were sighted at the nesting grounds in Wood Buffalo National Park, on the Alberta-Northwest Territories border." For years, conservation organizations have made every effort to post people along their migration route, to afford them full protection.

## INFORMATION PLEASE

PEREGRINE FALCON NESTING SITES. — An attempt is being made to determine the present status of the Peregrine Falcon nesting sites east of the Mississippi River. It would be very much appreciated if anyone who has visited known eyries of this species during the past ten years would communicate with the author.

There has been a drastic decline of this breeding population in the eastern U. S. in the past decade, hence I am particularly interested in learning about not only active sites at the present time, but also of any observations on eyries that have been abandoned or are known to have produced no young.

PROF. JOSEPH J. HICKEY, The University of Wisconsin, 424 Farm Place, Madison 6, Wis. 53706.

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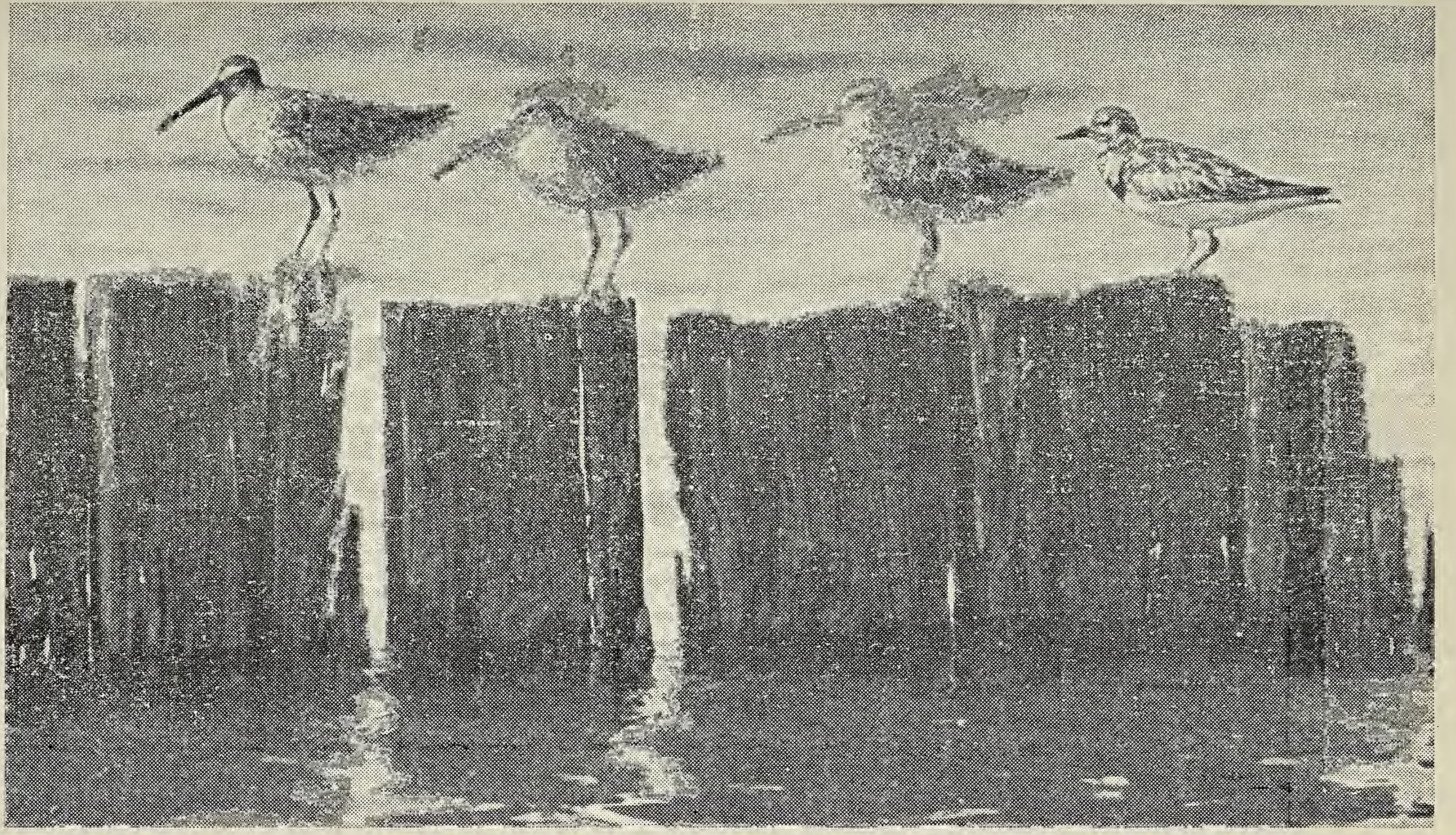

Short-billed Dowitcher *(Limnodromus griseus)* and Ruddy Turnstone *(Arnearia interpres)* in winter plumage perched on old pilings near Gulfport in Tampa Bay, Florida. The picture illustrates (1) lack of barring on lower underparts in the Short-billed Dowitcher, (2) wing extending beyond the tail (seen in bird on left) and (3) the fact that some Short-billed Dowitchers can have very long bills (see middle Dowitcher.)

Photograph by Allan D. Cruickshank

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# THE MIGRANT

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# THE DOWITCHERS IN TENNESSEE

### By JOHN C. OGDEN

The latest revision of the American Ornithologists' Union's Check List of North American Birds (1957) included a reclassification of the Dowitchers. Formerly these shorebirds had been classified as a single species consisting of several races (sub-species), divisible into Eastern and Long-billed forms. Due to thorough studies carried out on the behavior, morphology, and ecology of these birds, most recently by Pitelka (1950), the two forms were given specific rank. These two species are the Long-billed Dowitcher *(Limnodromus scolopaceus)* and the Short-billed Dowitcher *(Limnodromus griseus)*. The Short-billed species consist of three geographical races.

There are many unanswered questions concerning these two birds in Tennessee. What is their relative abundance in Tennessee? When do they migrate through the state? Do they migrate separately or together? With what other shorebirds do they associate? What habitats do they prefer while migrating? The purpose of this paper is not to answer these questions, rather I wish to review what is presently known about Dowitchers in Tennessee and present some information which may aid in future attempts to answer the above questions.

A search through THE MIGRANT reveals the following information about Dowitchers in Tennessee. First, they are not seen often, yet when a favorable shorebird habitat is present Dowitchers are recorded enough to almost be considered a regular transient. They are nearly always found in small numbers, as flocks of over ten are unusual. The published records even indicate that Dowitchers could be found in some part of the state every year if good shorebird habitat could be located and watched regularly. For instance, since Dowitchers were first recorded in the Nashville area in the spring of 1954 (MIGRANT, 25:23) a greater effort has been made to look for them, as well as other species of shorebirds. The results are that Dowitchers have been found during migration in six of the last nine years. Similar examples could be found in other parts of the state.

The published records do give us some good ideas of when to look for Dowitchers. In spring a majority of the records occur between mid-April and mid-May in Middle and West Tennessee with a concentration of the records in the first week of May. There are no spring records for East Tennessee. The dates of observation are 16, 17, 18, and 29 April; 3, 3, 4, 5, 6, 8, 11, and 12 May. There is one very early record just south of Memphis near Lakeview, Mississippi on 3 March, 1957 (MIGRANT, 28:7). In the fall there is a wider range of dates covering a period from early August to late October: 6, 7, 14, 18, 19, 22, 23, 24, 24, 25, 25, 25, and 27 August; 3, 4, 5, 8, 19, 20, 22, 23, 29, and 30 September; 6, 6, 7, 12, 13, 13, 13, 14, 17, and 25 October. This includes records from all parts of the state. Extreme records during the fall are of one Dowitcher near Nashville on 16 July, 1961

(MIGRANT, **33**:26) and a Dowitcher at Reelfoot Lake on 27 November, 1875 (MIGRANT, **7**:68). There is also an early December record across the river from Memphis, near Marion, Arkansas on 1 December, 1962 (MIGRANT, **34**:7).

A breakdown of the records by regions of the state reveals a majority of the records coming from the western part, and a very small minority from the eastern part. Middle Tennessee falls in between but closer to West Tennessee in the number of Dowitchers reported. I do not believe the poor showing in East Tennessee is necessarily correct. The first East Tennessee record was in the fall of 1957 (MIGRANT, **28**:41) and they have been found in three of the last six years in that part of the state.

Another fact which becomes immediately obvious is that there are nearly three times as many fall as spring records. I think it would be correct to assume that Dowitchers migrate through Tennessee more heavily in the fall than spring. That is, unless the spring migration is more hurried with fewer stops.

Other than the above information there is not much to be found out about these birds in Tennessee. Probably the preferred habitat of Dowitchers in inland areas is large mud flats with scattered pools of water, flooded fields, or shallow lake edges. Many records have occured in these type areas. Also, Dowitchers are not likely to linger for any length of time in inland areas except when very favorable conditions prevail. This is indicated by the large number of reports of birds found only once or twice.

One final bit of information (or lack of information), which can be gotten from the published records, concerns the identification of the Dowitchers to the correct species or subspecies. Prior to 1957 it was not necessary to worry about which Dowitcher you were seeing since they were classified as a single species. Yet, it was realized by many people that some well marked individuals of the two forms could be recognized in the field, primarily by bill length. So some birds were reported as being Eastern (Short-billed) or Long-billed Dowitchers based on this character. However, some birds, I believe, were reported as being one of the above according to which one "should" be seen in Tennessee, or some lesser reason. Therefore, most of the records which assign Dowitchers to one of the different species should be accepted with caution unless reasons are given for the assignment such as the following. Two reports of Dowitchers near Memphis give the following information: On 6 August, 1935, a Dowitcher was seen at North Lake and was "evidently the Eastern because of a relatively short bill." (MIGRANT, **6**:52) And on 20 September, 1937, two Dowitchers were seen at Mud Lake. "One . . . had a very long bill compared to that of the other bird and it is possible that one or both were of the Long-billed subspecies. . ." (MIGRANT, **8**:74) One definite identification was in 1939 when two Dowitchers were collected on 27 August, and identified in the hand as Eastern birds, (MIGRANT **10**:57).

In more recent years more caution has been used in assigning Dowitchers to a correct subspecies or, since 1957, a correct species. This may be due in part to the general trend of de-emphasizing sub-specific identification in the field, but I believe an equally important reason, especially since 1957, has been a lack of easily available information on the two species. Admittedly, the two species are very similar, but I do not consider them as difficult to identify in the field as the **Empidonax** species of Flycatchers. The rest of this paper will deal with various aids which can be used in the field to identify Dowitchers. These aids will be discussed under four basic headings: Plumage difference, Call notes, External morphological differences, and Migration.

Plumage differences: Dowitchers seen in Tennessee can be in one of three different plumages; the basic (winter or non-breeding), alternate (summer or breeding), or juvenal plumage. I will describe only the areas of these plumages which can be of value in separating the two species.

Dowitchers in the basic plumage will be the most difficult to identify since this plumage is very similar in the two species. The fact that *scolopaceus* has greyer underparts with little or no spotting and a more uniform grey back is of little use in the field. Also, the tail of *scolopaceus* is darker than that of *griseus* (dark and light bars in the tail are of near equal width in *griseus* whereas the dark bars are wider than the light ones in *scolopaceus)*. Characters other than plumage will be needed to identify birds in the basic plumage.

The two alternate plumages are not so similar. The underparts of *scolopaceus* are uniform salmon colored (no white) with dense spotting confined only to the breast. The sides of the breast and belly are barred. The back will be dark compared with *griseus* due to the narrow reddish-buff feather edgings. In *griseus* these feather edgings on the back are light buff and broader. There will be variation in the underparts of *griseus* depending on which race is seen. The eastern race will be salmon only on the breast and upper belly, the lower belly and under tail area being whitish. Also ventral spotting will be more general over all the underparts, including the belly. The interior race is more variable with some birds being as uniform salmon as *scolopaceus* while others will have some white on the lower belly. But these salmon colored birds will have more general spotting ventrally than *scolopaceus,* probably less heavy on the breast and not restricted to that area. Bars along the sides of the breast and belly will either be less obvious or entirely lacking, especially along the sides of the breast. Similar differences exist in the tails of the two species as was present in the basic plumages.

The juvenal plumages are perhaps even more dissimilar. Birds in these plumages will be seen in the fall. The color and pattern of the back and tail in the two juvenal plumages will be similar to the respective adult alternate plumages of the two species, basically darker in *scolopaceus* than in *griseus.* In *scolopaceus* the sides of the face and the neck and upper breast will be more grey than buff, only indistinctly marked on the breast with any markings. And in *griseus* the same areas will be more buff than grey, especially on the upper breast. Also spotting is fairly prominent on the breast of the *griseus.*

Call notes: Certainly the easiest way to identify Dowitchers will be by their call notes. The main problem will be to make silent Dowitchers "say something". Some Dowitchers can be very "stubborn" about calling, and at other times, especially if there are several birds, they call a great deal. Since no two people seem to describe their calls in exactly the same words, I will give several different descriptions from various sources of their notes.

Small (1958) writes that "Both species utter a musical twittering sound but the whistled pheu pheu or pheu pheu pheu (rising in pitch and softer and more rapid than the similar notes of the Lesser Yellowlegs) is characteristic of the Short-billed Dowitcher . . . The single or multiple high weak Keeeek note of the Long-billed Dowitcher is likewise distinctive."

Nisbet (1961) describes the call of *griseus* as a "triple küt-küt-küt- or chü-chü-chü" faster and less musical than the Yellow-legs, "with a metallic quality. . ." He further writes that the "Küt-note is often uttered singly, grading over into a sharp kyit which is sometimes given as a rattling series when the bird is startled."

For the *scolopaceus* he writes "a shrill, prolonged keeek, sometimes uttered in groups of three or more, and becoming a rippling trill if the bird is flushed suddenly."

The description Nisbet gives of the call of *griseus* is very close to the way it sounds to me. I would describe it as a rapid, unmusical "cu-cu-cu" falling in pitch. I have heard *scolopaceus* give a prolonged high pitched note similar to that which is described above, usually from lone birds. But the note I have heard much more often from small flocks of *scolopaceus* is a "peep" or "pip". This will be given by individual birds as sort of an alarm note while on the ground or by all members of the flock while in flight. And while *griseus* very rarely calls except as they are flushed, *scolopaceus* will continue to give their "peep" notes as they fly around after taking flight. Several times I have identified Long-billed Dowitchers in the air by hearing their regularly uttered "peep" notes even before the flock was close enough to identify the bird by sight as Dowitcher.

External morphological differences: *Scolopaceus* differs from *griseus* in that it tends to have a longer bill, longer legs and shorter wings. This provides us with one and possibly two external morphological features which may be of value in field identification. The one character which will certainly be of value on some birds will be bill length. Using the measurements provided by Pitelka (1950) we find the following extremes in bill length (25 millimeters equals about one inch): *scolopaceus* males, 54.4-69.6-mm.; *scolopaceus* females, 64.2-80.8mm.; *griseus* males, 50.8-64.0mm.; *griseus* females, 53.9-68.5mm. There is no overlap between bill length of males of *griseus* and females of *scolopaceus.* Yet the range of measurements in *scolopaceus* males and *griseus* females is very similar. Therefore, any relatively long billed or short billed Dowitchers may be identifiable in the field, but there will always be many birds in which bill length will be of no value due to the large amount of overlap.

The second external feature which may be of value is wing length. However, I have not found it to be of much use. It was suggested by Nisbet (1961). He suggests that "normally" folded wings should extend beyond the tail in *griseus* and fall short of the end of the tail in *scolopaceus.* In *griseus* the wings should extend up to one-half a centimeter past the end of the tail and in *scolopaceus* the wings should fall short of the tail tip by up to half a centimeter. There is so little difference here that it certainly would take close observation to detect any difference.

Migration: Observations of the migration of these two species of shorebirds in other areas of the eastern United States may be of some value in determining which of the two species are seen in Tennessee at various times of the year. Although *scolopaceus* breeds entirely in Alaska, it fans out to the east during its fall migration so that fair numbers are reported every fall along the East coast. This is particularly true of juvenal birds. Urner and Storer (1949) considered *scolopaceus* as uncommon in the fall in New Jersey but very rare in spring. In the Tallahassee region of Florida the situation has been similar, yet recent observations of *scolopaceus* in the early spring may indicate a return flight almost as large as their fall migration in this area, at least in some years. If *scolopaceus* returns to Alaska by a more western route from their wintering grounds this would explain their greater regularity in north Florida than in New Jersey in spring. Yet outside of these extreme southeastern areas, such as Florida and possibly other gulf coastal areas, *scolopaceus* will be more common in fall than spring. This is what would be expected in Tennessee. *Griseus* is a very common migrant in the east and on the Gulf both in spring and fall.

Another variation in the migration of these two species is in the time of year they migrate. Compared with *griseus, scolopaceus* is a later fall migrant and an earlier spring migrant. Urner and Storer in New Jersey give the peak of *scolopaceus* in the fall as late September and the first half of October, whereas *griseus* reaches its peak in late July and throughout August. In spring the peak of *griseus* is throughout May, while the few records of *scolopaceus* are in April or early May. In north Florida the migration peaks for *scolopaceus* occur in late October through early November and again in March and early April. This is confirmed by Bent (1962). However, these dates are just the peaks and there will be individuals of both species migrating outside these dates. For instance, the one Dowitcher I have seen in Tennessee, which I believe was *scolopaceus,* was on 7 August (MIGRANT, **33**:24) near Nashville.

Now to sum up the field identification of Dowitchers. Most of these shorebirds should be identified by a combination of the above aids, rather than by a single character. The possible exceptions would be in the use of the call notes or in extremely long or short billed birds. Even with all the information I have presented there will still be some Dowitchers which will have to remain unidentified. But if a fair percentage of the Dowitchers seen in Tennessee in the future are identified, then perhaps we can start answering the questions I presented at the beginning of the paper.

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# ANNUAL AUTUMN HAWK COUNT 1963

### By THOMAS W. FINUCANE

The T.O.S. Hawk Count in the fall of 1963 totaled 5655 hawks, of which 5434 were Broad-wings. Our 5-yr. average is 7500 and our 13-yr. average 4100. Three Bald Eagles and one unidentified eagle were recorded. The outstanding peculiarity of the Broad-wing migration was that it dropped to a low level 22 Sept. and did not recover. On the basis of accumulated statistics the peak was expected on 23 Sept., but it came 15 Sept.

The day set for maximum participation was 22 Sept. Seven stations reported that day, with a total of only 73 Broad-wings and 25 other hawks. Participation was excellent throughout the season. We had data for every day from 14 Sept. to 1 Oct., with an average of 2½ stations per day. The gap between 8 & 14 Sept. almost certainly was costly in loss of data but would not have been so in a normal season. The fact that the Rogersville-Kyles Ford lookout was not manned at all during the heavy migration period and the Mendota Fire Tower only on one day during this period also exerted a depressing effect.

The Greeneville Chapter decided to concentrate on Camp Creek Bald and Meadow Creek Bald, and the Kingsport group chose this year to test Chimney Top and continue the experiment on River Mt. We made five trips to Chimney Top, which had only once before been used as a Broad-wing lookout station, and Tom Odom was on the River Mt. Fire Tower four times, as he was the previous year. Interesting data emerged, but the Clinch Mt., generally a major source of data, was neglected.

Elder Mt., our other major source of data, had good coverage this year, headed by Adele West, but less than it has had in the past. Furthermore the flights there were lighter than in previous years. Moreover, Knoxville did get a big hawk flight in 1963, after having had one in each of the three preceding years. Reports from Fred Behrend, however, from the high mountains, showed larger counts than in the past few years although no observing was done during the period of heavy hawk flight. Perhaps eventually the T.O.S. program will show an inverse relation between the count at Elder Mt. and the count over the high mountains.

Cold fronts passed across Tennessee 4, 12-13, and 21 Sept. Interpretation of our data in terms of patterns in the fronts and the weather associated with them is not difficult. The first was followed by the 8 Sept. flight, 48 Broad-wings counted from the Mendota Fire Tower, the largest day's count we have ever made before 12 Sept. These hawks may have been involved in the eastern edge of the air mass, which passed into the ocean far to the north. The second disturbance was followed by our major migration, centering on 15 Sept. The weather-map pattern preceding this front was particularly complicated, but eventually the air mass behaved like the earlier one. The third front had practically no component moving eastward, the component which seems to indicate an increase in hawk migration through our territory, as discussed in earlier reports in this series. Eventually the relation between air-mass movements and the Broad-wing migration pattern in the T.O.S. project will be summarized in terms of the hypothesis presented in 1959 (THE MIGRANT **31**, 2, 1960) and details subsequently accumulated.

Red-headed Woodpeckers are becoming fairly common on hawk flyways. In 1959 Adele West saw 12 in just a few minutes, on Elder Mt. (THE MIGRANT **31**, 3, 1960). We have been seeing them every year for 3 or 4 years, and several years ago, having learned their flight patterns, I spotted two on the Hawk Mt., Pa., flyway. For the first time we saw and heard Bluebirds from our perch on the Mendota Knob, in 1963. Both species are gaining ground in upper east Tennessee.

## NOTES

The numbers refer to the first column of page 10.

1. 31 Aug.—River Mt. Fire Tower is on a ridge overlooking the Holston River and U.S. 11-W and usually considered part of Bays Mt. For many years we had hoped to make a study of hawk migration at this fire tower. Now it has been achieved by Tom Odom, 1962 and 1963. His reports show that although this lookout is approximately on a line between the Mendota Fire Tower Knob and Chimney Top, the Broad-wing migration observed on the River Mt. Fire Tower is considerably smaller. On the other hand, the other raptores fly close to the tower and can be studied to great advantage.

2. Mendota Fire Tower—A good count for so early in the season, especially in view of the short period of observation, 2 hrs., 45 min. A cold front had passed over, a day or two before.

7. 8 Sept.—This is the largest count we have had on or before 8 Sept.

8. 14 Sept.—The first of 18 consecutive days of observation of hawk migration in our territory. During these 18 days the average coverage was 2½ stations per day. Between 12 & 13 Sept. a cold front passed over and was followed, 15 & 16 Sept., by a large movement of Broad-wings, recorded nearly simultaneously in all parts of our territory. The flight started early on 14 Sept. but was choked off by adverse weather. When we reached the ridge on Chimney Top, it was already 10:30. There was an overcast, and Broad-wings were flying at eye level. Not long after we reached the lookout, at 10:45, we became aware of a huge mass of murk creeping in through the valleys and over the mountains to the south. Around 11:30 we retreated into a cave and ate lunch. We had counted 50 hawks in less than an hour. The murk was accompanied by a light, stinging rain but was definitely not a severe storm. At 1:15 it was possible to return to our lookout, and eventually the weather cleared. For a long time, however, the murk remained visible, progressing northward toward the Clinch. In the next 4 hrs., of good weather, we counted only 3 Broad-wings.

9. The count on the River Mt. Lookout started 1½ hr. earlier, on 14 Sept., at 9:10 a m. One reason for the late starts is that both River Mt. and Chimney Top require hiking. It is easy to get to the Mendota Fire Tower at 8:00, but we decided to abandon it in favor of Chimney Top and River Mt. Also the Greeneville Chapter decided to concentrate on Camp Creek Bald instead of the Rogersville-Kyles Ford lookout on the Clinch. River Mt., 14 Sept., had its biggest total, with 43 Broad-wings before 11:30 a. m. and 3 during the next 5½ hrs. and also 7 other hawks. We feel that the count might have been much higher on the Mendota Fire Tower because we would have reached it several hours earlier and the murk described in the preceding note would have arrived several hours later.

10. 15 Sept.—This was Elder Mt.'s highest count for 1963. In previous years it has had much higher counts: in particular, 4985 on 25 Sept., 1960.

11. This observation by Mrs. Bell was made 20 mi. west and 60 mi. north of Chattanooga. When records are made simultaneously at several places, those made farther southwest are earlier when the migration is going southwest. It is difficult to say, however, that the hawks in this report are significantly later than the ones in the Elder Mt. report, because both locations are on the outer edge of our territory, and we have no information on what course is followed beyond.

"On 15 Sept., I was up at Center Hill Lake, where we have a summer cabin, for the weekend. My granddaughter Susan Bell and I went out for a short bird walk along the ridge road — known as 'Ridgetop Road'. I did not expect migrant hawks so soon, or particularly at that location and so was not looking for them. However, at one stop when we were watching for warblers in a tree, I happened to notice five hawks together, which most certainly were Broad-wings. I was excited, of course, because I realized the Broad-wings must be flying that day. They came from the north or northeast and went south. In what seemed a very short time we counted 236 Broad-wings, one Marsh Hawk, 2 Red-tailed Hawks, and three unidentified buteos. The Broad-wings came in flocks — one flock of 56. I do not know the exact time, but I'd guess between 10:00 and 11:15.

"Miss Riggs, Mrs. Goodpasture, Miss Castles, and I had planned a hawk-watching trip to Bon Air for 28 & 29 Sept. but realized that would be much too late this year and so did not go."

"15 Sept. was warm, with the temperature in the 80's and practically no wind. The location is just off U.S. 70 and about 8 mi. east of Smithville."

12. Ten members of the Greeneville Chapter participated. The scarcity of hawks on a day when the other stations had their best counts is not surprising in view of the fact that Camp Creek Bald is well to the south of Chimney Top, and the heavy count there was late in the day. The murk on the previous day blocked off southward flight but not westward flight, and so the hawks reached Elder Mt. and Mrs. Bell's area long before they could get to Camp Creek Bald.

13. Chimney Top had 21 between 10:00 and noon, 2 between noon and 3:30, then 41 in the next half hour, 456 between 4:00 and 4:30, and 126 later.

14. The Broad-wings came in one group between 2:00 & 2:30, although observation was maintained between 9:35 and 4:05 by Tom Odom on the River Mt. lookout: "Broad-wings appeared east of tower, kettled, and soared west right over tower, in staggered flight. The Red-shouldered Hawk appeared about 5 min. after the Broad-wing flight — windows very plain, a beautiful bird."

One more Broad-wing was seen by Mr. Odom just after he had left the lookout. The big flights occurred during the next hour. No one knows how many would have been seen at the River Mt. lookout. The count on the Mendota Fire Tower lookout had been 130 Broad-wings in a fairly steady stream up to 2:30; one group of 42 might have appeared as the group of 39 seen over River Mt., but none of the others seen at Mendota could have passed near the River Mt. lookout. So it is not certain that the big flights later would have been seen over River Mt.

15. The day started with a thin, dark overcast and no fog, only a light haze at ground level. By 9:30 the overcast had acquired a mottled aspect; it receded slowly northward and left clear blue sky over the area south of the Clinch. Some cumulus developed later. The hawk count after 2:30

# HAWK OBSERVATIONS FALL OF 1963

| | | | | | | | | | | | | | | | | | Unidentified | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. | Date | Obr | h. | Lookout | Alt. | Wind | F | Sky | Shr | Cpr | Rtl | Rsh | Bdwg | Msh | Osp | Sph | Acc | But | Other |
| 1 | 8/31 | O | 5 | River Mt. | 2379 | 2-5 W-NW | 7-7½ | 2 | .... | .... | .... | .... | ........ | .... | .... | .... | .... | .... | .... |
| 2 | 8/31 | CoC | 3 | Mendota | 3000 | 6 NE-E | ...... | 4 | .... | .... | 3 | .... | 13 | .... | .... | 1 | .... | .... | 2f |
| 3 | 9/1 | O | 2½ | Hemlock Kb. | 4032 | 2-3 SW | 7-7½ | 2 | .... | .... | .... | .... | 2 | .... | .... | .... | .... | .... | .... |
| 4 | 2 | CoQ | 2½ | Mendota | 3000 | 3-4 W-NW | ...... | 3 | .... | .... | .... | .... | 4 | .... | 1 | .... | 1 | 1 | .... |
| 5 | 7 | O | 6½ | River Mt. | 2397 | 0-4 W-NW | 7-8 | 5 | .... | .... | 2 | .... | ........ | .... | .... | 2 | .... | .... | .... |
| 6 | 8 | W | 3 | Elder Mt. | 1880 | 0-2 SE | ...... | 0 | .... | .... | .... | .... | 6 | 1 | 1 | .... | 1 | .... | .... |
| 7 | 8 | FR | 8 | Mendota | 3000 | 0-2 S-NE | 8½ | 1 | .... | .... | 2 | .... | 48 | .... | .... | .... | .... | .... | 3 |
| 8 | 14 | FH | 7 | Chim. Top | 3100 | 6 E | 6 | 5 | 1 | .... | .... | .... | 57 | .... | 1 | .... | .... | .... | 2 |
| 9 | 14 | O | 8 | River Mt. | 2405 | 2-6 SE | 6-6½ | 5 | 3 | 1 | 3 | .... | 46 | .... | .... | .... | .... | .... | .... |
| 10 | 15 | W | 6 | Elder Mt. | 1880 | 2-4 SE | ........ | 4 | .... | 1 | .... | .... | 813 | .... | 1 | 1 | .... | .... | .... |
| 11 | 15 | S | 1¼ | see note | | 0 | 8½ | | .... | .... | 2 | .... | 236 | 1 | .... | .... | .... | 3 | .... |
| 12 | 15 | Gvl | 6½ | Camp Ck. Bld. | 4844 | 6 S | 6-8 | 4 | .... | .... | .... | 2 | 1 | 1 | .... | .... | .... | .... | .... |
| 13 | 15 | JH | 7 | Chim. Top | 3100 | 2-3 E | hot | 3 | 1 | .... | .... | .... | 636 | .... | .... | .... | .... | .... | .... |
| 14 | 15 | O | 6½ | River Mt. | 2405 | 0-3 SE-E | 6-7 | 3 | 3 | .... | .... | 1 | 40 | .... | .... | .... | .... | .... | .... |
| 15 | 15 | FRD | 8½ | Mendota | 3000 | 3-4 S | 6-7 | 3 | .... | 1 | 3 | .... | 980 | .... | 2 | .... | .... | .... | 2 |
| 16 | 16 | G | 5 | Elder | 1880 | .... | ........ | .... | .... | .... | .... | .... | ........ | .... | .... | .... | .... | .... | .... |
| 17 | 16 | N | 3 | Bluff Mt. | | 2-3 S | 7-8½ | 3 | .... | .... | .... | .... | 1257 | .... | .... | .... | .... | .... | .... |
| 18 | 16 | FJ | 8½ | Chim. Top | 3100 | .... | 7-8½ | 3 | 1 | .... | .... | .... | 89 | .... | .... | .... | .... | .... | .... |
| 19 | 17 | ChJ | 6¼ | Mendota | 3000 | 0-2 W-N | 7½ | 2 | 2 | .... | 1 | .... | 254 | .... | .... | .... | .... | .... | .... |
| 20 | 18 | M | 8½ | Knox Co. | 950 | 1-2 NW | 6-8 | 2 | .... | .... | .... | .... | 51 | .... | .... | .... | .... | .... | .... |
| 21 | 18 | B | 6¼ | Buck Ridge | 4300 | 1-3 SE-NW | 6 | 3 | 1 | .... | .... | .... | 66 | 3 | .... | .... | .... | .... | .... |
| 22 | 19 | WGV | 6 | Elder Mt. | 1880 | 0-2 E-N | 6-9 | 0 | .... | .... | .... | .... | 15 | .... | .... | .... | .... | .... | .... |
| 23 | 19 | B | 9 | Holston Mt. | 4200 | 1-4 NW-N | 6 | 1 | 1 | .... | .... | 1 | 43 | .... | .... | .... | .... | .... | .... |
| 24 | 20 | ChJ | 5½ | Mendota | 3000 | 0 SE | 7½ | 0 | .... | 1 | .... | .... | 107 | .... | .... | .... | .... | .... | .... |
| 25 | 21 | WGV | 5 | Elder Mt. | 1880 | .... SE-N | ........ | .... | .... | 1 | .... | .... | 274 | 1 | .... | .... | 1 | 2 | 4 |
| 26 | 21 | B | 3½ | Roan Mt. | 5800 | .... .... | 6½ | 0 | .... | .... | 2 | .... | 1 | 1 | .... | .... | .... | .... | 3 |
| 27 | 21 | FH | 8½ | Chim. Top | 3100 | 0-3 NE | 8 | 1 | .... | .... | .... | 2 | 40 | .... | .... | .... | 1 | .... | .... |
| 28 | 21 | O | 7 | River Mt. | 2405 | 0-2 SE-NW | 7-8½ | 1 | .... | 1 | .... | .... | ........ | .... | 1 | 1 | .... | 1 | .... |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29 | 21 | Rol | 5 | Mendota | 3000 | 0-3 var. | mod. | 1 | .... | .... | .... | .... | 38 | .... | .... | .... | 1 | .... | .... |
| 30 | 22 | W | 3¼ | Elder Mt. | 1880 | 2-6 NE | ........ | 0 | .... | .... | .... | .... | 8 | 1 | 1 | .... | .... | 1 | 1 |
| 31 | 22 | B | 8 | Roan Mt. | 6250 | 3-4 N | 5 | 0 | 2 | .... | 2 | .... | 14 | 1 | 1 | .... | .... | 3 | 3 |
| 32 | 22 | E | 6½ | Rockwood FT | 2036 | 3-5 ESE | 5½-7 | 1 | .... | 1 | .... | .... | 3 | 1 | 1 | .... | .... | .... | .... |
| 33 | 22 | Gvl | 6 | Meadow Cr. | | 6-7 NE | 7 | 0 | .... | .... | .... | .... | 9 | .... | .... | 2 | .... | 1 | .... |
| 34 | 22 | T | .... | Powell Mt. | 2500 | 3-5 NNE | 6½-7 | 0 | .... | .... | .... | .... | 10 | .... | .... | .... | .... | .... | .... |
| 35 | 22 | M | ½ | Knox Co. | 950 | 3-4 N | 5½-8 | 2 | .... | .... | .... | .... | 27 | .... | .... | .... | .... | .... | .... |
| 36 | 22 | Kpt | 7¼ | Mendota | 3000 | 2-5 NE | 6-7 | 0 | 1 | .... | 1 | .... | 2 | .... | .... | 1 | .... | .... | .... |
| 37 | 23 | M | ½ | Knox Co. | 950 | 3-4 N | 5-7½ | 2 | .... | .... | .... | .... | 14 | .... | .... | .... | .... | .... | .... |
| 38 | 23 | B | 7 | Hump Mt. | 5587 | 2-5 var. | 4-5 | 2 | 2 | .... | 1 | .... | 167 | .... | .... | 1 | .... | 2 | .... |
| 39 | 24 | B | 5½ | Jane Bald | 5700 | 1-2 S-SE | 4½-5 | 0 | .... | .... | 1 | .... | 10 | .... | .... | 2 | .... | .... | 3 |
| 40 | 24 | B | 2¼ | Roan Mt. | 6250 | 4-5 SW | 4½-5 | 0 | .... | .... | 1 | .... | 2 | .... | .... | .... | .... | .... | .... |
| 41 | 24 | ChF | 4½ | Mendota | 3000 | .... | 6 | 0 | 1 | .... | .... | .... | 3 | .... | 1 | .... | .... | .... | 3 |
| 42 | 25 | B | 8 | Hump Mt. | 5000 | 3-5 S | 4½-5 | 2 | 1 | .... | .... | .... | 3 | .... | .... | .... | .... | 2 | .... |
| 43 | 26 | B | 8 | Holston Mt. | 4200 | 1-4 SE-N | ........ | 2 | .... | .... | .... | .... | 6 | .... | .... | 1 | .... | 1 | .... |
| 44 | 26 | QWh | 2½ | White Top | 5534 | .... .... | 7½ | 3 | .... | .... | .... | .... | 13 | .... | .... | .... | 1 | 1 | 1f |
| 45 | 27 | G | 4 | Elder Mt. | 1880 | .... .... | ........ | .... | .... | .... | .... | .... | ........ | .... | .... | .... | .... | .... | .... |
| 46 | 27 | B | 5½ | Camp Ck. Bld. | 4844 | 2-3 W | 4-5 | 5 | 2 | 1 | 2 | .... | 2 | .... | .... | .... | .... | 1 | 1 |
| 47 | 27 | FD | 8 | Mendota | 3000 | 0-3 var. | 7-8 | 0 | 1 | .... | 1 | 1 | 3 | 1 | .... | .... | .... | 1 | .... |
| 48 | 28 | FH | 1½ | Mendota | 3000 | 4 SSE | 6 | 5 | .... | .... | .... | .... | ........ | .... | .... | .... | .... | .... | .... |
| 49 | 29 | W | 4 | Elder | 1880 | .... .... | 7 | 0 | .... | .... | .... | .... | ........ | .... | .... | .... | .... | 1 | 1 |
| 50 | 29 | ON | 6½ | Rogrsvl. FT | 3000 | 4-5 NW | 7½-8 | 2 | .... | 4 | 2 | .... | 6 | .... | .... | 1 | .... | .... | 3 |
| 51 | 30 | Rol | 4½ | Mendota | 3000 | 3-5 S | 5-6 | 0 | 1 | .... | .... | .... | 2 | 1 | 1 | .... | .... | .... | 1e |
| 52 | 10/1 | F | 7 | Mendota | 3000 | 1-6 SE | 7 | 0 | 1 | 1 | 2 | .... | 4 | .... | .... | 1 | .... | 1 | .... |
| 53 | 3 | M | .... | Knox Co. | 950 | 2-3 WNW | 6-8 | 2 | .... | .... | .... | .... | 8 | .... | .... | .... | .... | .... | .... |
| 54 | 6 | ChD | 4 | Mendota | 3000 | 0 NE | 6 | 0 | 1 | 2 | .... | .... | ........ | .... | .... | .... | .... | 3 | .... |
| 55 | 13 | FH | 5¼ | Mendota | 3000 | 1-4 SE | ........ | 1 | 4 | .... | .... | .... | ........ | .... | 1 | .... | .... | 2 | .... |
| 56 | 11/7 | M | ½ | Knox Co. | 950 | 3-4 N | 5-6 | 3 | .... | .... | 21 | 4 | ........ | .... | .... | .... | .... | .... | .... |
| | TOTALS | | 289 | | | | | | 30 | 15 | 52 | 11 | 5434 | 14 | 13 | 14 | 6 | 27 | 33 |

Also—No. 7: 2 Peregrines; No. 12: Bald Eagle; No. 33: 2 Bald Eagles, Rough-legged Hawk
**f** designates unidentified falcon; **e** designates unidentified eagle.

p. m. was distributed in the same way as the Chimney Top Count but 50% higher. The large groups were more scattered than they had been in 1962 and more difficult to count. At 3:30, Coffey, Dubke, and Smith arrived and helped us count. Data analysis showed very little overlap in the hawks counted at the two stations—Mendota and Chimney Top.

16. 16 Sept.—No hawks at all on Elder Mt. On the day before, Mrs. West recorded only one Broad-wing between 9:00 and 11:00 and then had a fairly steady stream, tapered at both ends, for two hours. Observation was terminated at 3:00 after a full hour with no hawks. We might speculate that the phenomenon which we saw cutting off the flight in our area produced the gap in the data at Elder Mt. and that perhaps a large count could have been made on 17 Sept., at Elder Mt.

17. Richard Nevius, after a dull day on Camp Creek Bald, made the largest count of the 1963 migration: "We have an alfalfa field at the end of Bluff Mt., a part of the Bays Mt. chain, and while I mowed I watched occasionally for hawks, just a glance at the clouds. On one glance I saw them, already partly gone to the southwest, towards Bulls Gap. At 10:05 I started to count and had 986 at 10:25, at which time I thought they were all gone. They were high; I had no glasses. I counted them against the white of a big cloud out of which they were coming. Once in the blue, I couldn't see them. The first part went out of sight before I could count them, probably several hundred. After finishing the count, at 10:25, I made another trip around the field and discovered they were still going, at 10:35, and will never know how many went past during that 10 min., but during the next 10 min. I counted 271 more. That seemed to be the end; I didn't see another hawk all day (to 2 p. m.). Apparently they had all come from the same roost somewhere towards Kingsport, maybe right under Chimney Top. It is about 40 mi. in a fairly straight line from where I was to Kingsport."

18. It would be senseless to argue that the hawks reported in No. 17 did not include some of those seen the day before. We felt, however, that a flight still heavy late in the day would continue the next day. To avoid duplication we should have gone to the Mendota Fire Tower but went to Chimney Top instead and sat most of the morning under a big white cloud that lingered there. Between 9:00 and 9:30 we had 53 and during the next two hours 35 more. We saw one more, at 3:15 and left an hour later. The cloud left us at about 11:30, probably the cloud Mr. Nevius had counted his hawks against.

19. 17 Sept.—Hawk flight continued all day at the Mendota Fire Tower. A count of 26 was made after 4:00 from the trail leaving the knob and from the gap below.

25. 21 Sept.—This was the last count above 200 made in 1963 in the T.O.S. hawk project. Our statistical peak date had been 22 Sept. The weather was good, and a cold front had passed, 20 Sept. On the basis of the poor data at Chimney Top and River Mt. on this date, particularly in connection with the recent front, we decided not to observe at these two stations on 22 Sept.

36. 22 Sept.—Combined-operation day — Mrs. Swindell counted 27 Broad-wings.

38. 23 Sept.—The total of 167 Broad-wings is particularly interesting. It suggests a return of the hawk migration to higher altitudes, in conjunc-

tion with other data logged by Fred Behrend in the 1963 count. We had some very clear days, during the season. The view from the Clinch Mt. was remarkably good, 22 Sept. Also the lack of the high totals we have come to expect from Elder Mt. may be related to the higher flights. Unfortunately, the high mountains were not covered during the period when the big migration was (unexpectedly) in progress. Not counting this Hump Mt. report, Mrs. Swindell's count of 27 on 22 Sept. was not surpassed by any two others added together, after 21 Sept.

52. 1 Oct.—This was part of a particular effort to establish more firmly that the Broad-wing migration had practically ended in the middle of the season, in spite of fine weather.

56. 7 Nov.—Another good Red-tail count by Maxie Swindell.

## KEY TO REPORTERS

B—Fred W. Behrend, Elizabethton; C—George Craig, Bristol; Ch—Charlotte Finucane, Kingsport; Co—Wallace Coffey, Bristol; D—Dan Finucane; E—John and Elizabeth Elson, Knoxville; F—Thomas W. Finucane; G—Carl M. Gevers, Chattanooga; Gvl—Greeneville Chapter: Elva Darnell, Mr. and Mrs. Carroll Hinkle, Mr. and Mrs. Richard Nevius, Harriet, Harry, Olivia, and Richard Roberts; H—Tommy Finucane; J—John Finucane; Kpt—12 people from Kingsport, mainly visitors, a group also from Bristol and one from Abingdon; M—Mrs. Thomas C. Swindell, Knoxville; N—Richard Nevius; O—Thomas A. Odom, Kingsport; Q—Bob Quillen, Bristol; R—Dick Finucane; Rol—Holmes Rolston, Bristol; S—Mrs. Sue M. Bell, Nashville; T—James T. Tanner, Knoxville; V—T. L. Rogers, Chattanooga; W—Mr. and Mrs. Eugene West, Chattanooga.

## SKY CODE

0. Clear; sunny; very clear.
1. Clear with haze; sunny, hazy.
2. Scattered clouds; high cirrus; mostly clear.
3. Cloudy to clear; overcast till 11 a. m., clear after 11; partly cloudy, fairly clear.
4. Heavy overcast to clear; overcast to broken clouds.
5. Bad grey fog, cumulus; overcast and rain, clear later; overcast, hazy; complete overcast, visibility good.

## BEAUFORT WIND SCALE

0—Less than 1 knot; 1—1 to 3; 2—4 to 6; 3—7 to 10; 4—11 to 16; 5—17 to 21; 6—22 to 27; 7—28 to 33; 8—34 to 40; 9—41 to 47 knots. (A knot is 1.15 mph.)

## TEMPERATURE CODE

Figures given are degrees F divided by 10.

1434 Watauga Street, Kingsport, Tenn.

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BOOKS ON BIRDS, and other related subjects frequently go out of print within a few years after which they may only be secured from a dealer interested in collecting and stocking them. Such a dealer is the Pierce Book Co., of Winthrop, Iowa, which issues an annual catalog and handles new books as well. Fred Pierce, the proprietor, is a competent bird-man and was for some years the editor of **Iowa Bird-life.** — A. F. G.

# THE SEASON

MEMPHIS. — The Bufflehead continued common on Horseshoe Lake, Ark., 293 being recorded 23 Feb. and over 80 found 29 Feb. On latter date 101 Canvasbacks also. Redheads — 4 on Horseshoe 23 Feb. and 2 in Lakeview, Miss. area, 22 Jan. (Mrs. Helen Dinkelspiel, Ed, Jr. and Mrs. Ed Carpenter). Herring Gulls, 3, 23 Feb., but no Horned Grebes found on Horseshoe Lake or on nearby Porter Lake this season.

A male Goshawk was reported shot 19 Dec. 1963 near Snow Lake, Ark.; because it appeared unusual it was brought to Berry Brooks of Memphis, then given to Lee Grimmig who will eventually mount it. The specimen was subsequently checked by the writer who has never seen this species in this area.

More Pine Siskin records: 2 on 8 Nov. 63, Eudora, Miss. area (HD, TC, Mrs. Arlo Smith); 12 on 19 Jan. Chucalissa area, Memphis (TOS); 4 on 4 Feb. and 2 on 5 Feb., Coffey Grounds' sweet gums; one on 18 Jan., Walnut Log area, Reelfoot; 50 on 14 Dec., Lake Placid, Chickasaw SP. (No further Red-breasted Nuthatches.) Lapland Longspur, 150, 26 Jan. and 2, 7 March, Penal Farm; only 5, 16 Feb., Stuttgart, Ark. airfield; and 5 on 1 Mar., Lakeview, Miss. Further Smith's Longspurs: 8 on 9 Feb., Jonesboro, Ark. airport, 2 on 16 Feb., Stuttgart airfield.

2 Feb., driving Interstate 40, north of Jackson, we noted 9 good to heavy blackbird lines crossing. The roost was found south of town in bottoms between Bemis and Cane Creek Baptist Church. We were unable to return to check flights in from the south. I would judge the size as 5,000,000 or more, the largest roost we have seen. About 40% in the lines noted were Common Grackles; Starlings and small blackbirds also present.

The first Purple Martins reported were 3 on 1 March by James Lancaster at his box. A 29 Feb. - 1 Mar. run of some length for Tree Swallows and Golden Plover was unsuccessful.

BEN B. COFFEY, JR., 672 N. Belvedere, Memphis 7, Tennessee.

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NASHVILLE. — This is a report on the period from 15 Jan. through 29 Feb. No Loon were reported. Horned Grebe wintered again on Old Hickory Lake with 35 on 18 Jan. and 100 on 29 Feb. that included one flock of 75, largest ever here. Pied-billed Grebe were very scarce after Christmas. Ducks seemed more numerous than the past three years with up to 500 on Bush Lake. The following were there regularly except for a few days in early Jan. when the lake was frozen: Mallard, Black, Gadwall, Redhead (3 to 4), Ringnecked (a few until 11 Feb. with 60 and up to 250 on 17 Feb.) Canvasback, (from a dozen to 55 on 29 Jan. and 67 on 6 Feb.), Lesser Scaup, (very scarce until late Feb. with 300), Common Goldeneye, (one to five), and Bufflehead (1 to 4). Pintail to six were on Bush in late Feb. American Widgeon arrived there on 3 Feb. with 3 and up to six stayed through the period. On 29 Feb. 60 Common Goldeneye were on Old Hickory Lake, with 47 in one flock, the largest ever here. Eight Oldsquaw were on Old Hickory 1 Feb. (LOT) and remained through the period. A dozen Hooded Merganser were found on Old Hickory Lake 18 Jan. as were eleven Common Merganser, and 200 of the latter were seen there on 29 Feb. Records for the above ducks at Bush Lake are by HEP, those on 18 Jan. at Old Hickory by LOT, HEP, and on 29 Feb. by LOT, JOE, HEP.

American Coot were scarce after Christmas both at Bush and Old Hickory Lakes. Kildeer were scarce everywhere all winter. Fifteen Herring Gulls on Old Hickory 29 Feb. was the most for the period. 800 Ring-billed Gulls on 8 Jan. (LOT) was the winter's peak and the most ever here. Bonaparte's Gull wintered for the first time, with 200 still here on 18 Jan. and this dropped to 25 on 29 Feb.

Phoebe's were scarce, but here. A few Red-breasted Nuthatch reports were made for the period. Robins and Grackle were almost absent from Christmas until mid Feb. and returned in normal numbers. Myrtle Warblers were extremely scarce all winter. No Evening Grosbeak was reported for the winter. Purple Finches were present at many feeders in considerable numbers. There were more reports of Pine Siskins than we have had in many years.

HENRY E. PARMER, 3800 Richland Ave., Nashville, Tenn. 37205.

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COLUMBIA. — Since the Christmas census, our only major activity has been the tracking down of a large blackbird roost which was finally located 25 February on the south edge of the town of Lewisburg adjacent the by-pass highway. For at least two months, this roost escaped our detection because it was not believed that birds were flying from the Columbia area as far as Lewisburg. It is now known that from the west and north, birds fly as far as 45 miles into this roost. There has been no report of a similar roost in South Central Tennessee but flyways from the east and south have not been checked to see how far they extend. The roost is located in a total area of about 100 acres of mixed tall deciduous trees and fairly low densely-clustered cedar trees. The birds finally come to roost in about a 40 acre tract of almost impenetrable cedar trees. Accurate counting has defied all scientific methods, but the roost is of the order of one million birds. It is composed of about 50 per cent Starlings, 20 per cent Redwing Blackbirds, 10 per cent Rusty Blackbirds, 10 per cent Common Grackles, 8 per cent Brown-headed Cowbirds and less than 2 per cent Robins. Because a large Robin roost was found in the vicinity of Arrow Lake at Christmas time, it may well be that most of the Robins in this area have continued to roost separately.

The Pine Siskins and Evening Grosbeaks, apparently numerous this winter in East Tennessee, have not been observed here.

GEORGE R. MAYFIELD, JR., Maury County Hospital, Columbia.

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CHATTANOOGA. — An absence of a season report for the fall of 1963 prompts a brief resumé. Species of note seen in the Savannah Flats area of Chattanooga are an important contribution by Benton Basham. Two very rare records for the "flats", both reported on 18 August are the Sanderling (1), and Ruddy Turnstone (2). Also seen on the same date at the "flats" are the Black Tern, Dowitcher (1) and an early Pied-billed Grebe all recorded by Mr. Basham. He also banded the Spotted Sandpiper (1) and Western Sandpiper (2). On 20 August, he returned to the location and banded a single Solitary Sandpiper.

Other notable records for the Chattanooga area indicate the importance of banding in interpreting the migration and flow of species. From 15-30 Sept., Basham recorded the Nashville Warbler (4), Mourning Warbler (5), one an adult (M). One Wilson Warbler was banded as well as (11) Northern Waterthrush between 5 Sept. and 7 Oct. Basham also indicates that one of the most spectacular catches of the season is the single Pileated Woodpecker on 17 Oct. This is his third catch of that specie. Hummingbird numbers were significant during the fall in that he banded 37 between 15 Aug. and 25 Sept.

The winter season in the Chattanooga area has been marked by a rather mild winter with only short periods of intensely cold weather. The mildness of the winter is in contrast to the invasion of northern species experienced in this area. Of interest, the Red Crossbill (4), B. Basham, seen on 1 Jan. are the first recorded. Another Red Crossbill was found dead on Lookout Mountain late in January (date unknown). It was viewed at the February meeting by the club members after Dr. W. K. Butts related the story of its finding by a woman resident of the mountain. This particular bird looked none the worse for having been buried then exhumed after she had learned that it was rare.

The Basham-Halverson party recorded Whistling Swans (6) at the Wood's Hole (near Tullahoma) on 3 January.

Red-breasted Nuthatches have been unusually common in this area during the winter. This Nuthatch has been recorded almost daily at Point Park on Lookout Mountain (R.E. & R.T.B.). Purple Finches have been present in large numbers all winter. The Barrs report in excess of 150 at one time at their feeding station. In contrast to the above, the Evening Grosbeak has not been seen. Only one unsubstantiated report for the Grosbeak came from Lookout Mountain. Pine Siskins have been so numerous and scattered this winter at Point Park and elsewhere as not to warrant exact dating. The flocks have ranged from 20-50 individuals. The Barrs have had 4 Fox Sparrows as constant companions at their feeding station during the winter. This deserves a note because the St. Elmo banding station has banded 10 recently when only one might be expected from past banding years. It is also interesting to note that the Oldsquaw and Bonaparte's Gull have not been reported for the season.

Ducks or waterbird records for the period around Chattanooga have been in short supply although word has been given that the state as a whole had one of the best years yet!

Three male Yellowthroats were seen on 24 Mar., (R.E., B.C., R.T.B.). One was netted. Although not the earliest record for Chattanooga (3 Mar.), the signal was given for spring migration. Early spring date for the Rough-winged Swallow is 23 Mar. (R.T.B.), previous (25 Mar.), when three were seen at Morse Pond just across the Tennessee-Georgia border. A Palm Warbler was also seen by Roy Evenson and Bill Clark (Atlanta) while banding at the Pond on 24 Mar. Although two winter records of the Palm have been recorded it is assumed that this was a migrant.

A Lesser Yellowlegs and Least Sandpiper were seen on 21 Mar. by the Halverson-Basham party at Savannah Flats. Mr. Halverson reports that an early record (2 Feb.) for the Purple Martin was recorded by a non-member (Mr. Barnes) near the Savannah Flats area. Member Halverson confirmed the birds several days later. Previous early is 18 February. Mr. Barnes has been placing up to 70 gourds a year for the last 36 years.

Maxine Crownover reports that she saw 60 Sandhill Cranes flying about 200 feet overhead at Chickamauga Park, Georgia on 8 March.

RALPH T. BULLARD, JR., 3302 Navajo Drive, Chattanooga 11, Tenn.

KNOXVILLE. — An unusual number of rare birds have appeared in this area during the last few months. Weather conditions do not appear to be responsible for this, as these have not been unusual. A heavy crop of hemlock seeds may have had something to do with the fact that some of the rare seed-eaters stayed in the area. The records of White-winged Crossbills, Red Crossbills, and a Pigeon Hawk will be reported later. A flock of seven Evening Grosbeaks has been visiting Mrs. R. A. Monroe's feeder from 7 January to at least 4 March; a single bird at my house on 8 March is the only other record of Grosbeaks we have except for fairly large numbers in Gatlinburg and the Smokies. The Lark Sparrow which has been attending Mrs. Swindell's feeder since last fall was still doing so on 4 March. A Baltimore Oriole, either a female or a young male (definitely not a Bullock's Oriole), appeared at the feeding station maintained by Mrs. Earl Hash in south Knoxville on 10 February and every other day or so until at least 9 March. Its favorite food was grapes. Brockway Crouch saw a Rough-legged Hawk at close range on 6 January, and Paul Pardue a Greater Scaup on 22 January. Bald Eagles have been observed at several different dates below Norris Dam, along Melton Hill reservoir, and near Kingston.

Pine Siskins remained in the area in large flocks through the first part of February and in small flocks of 25 or so into early March. Red-breasted Nuthatches remained all winter in small numbers. Rusty Blackbirds were observed through January, but none was reported in February. Purple Finches have been in good numbers all winter; the Hash's feeding station has been visited by a Purple Finch that is almost a complete albino.

An early sign of spring was a flock of Red-shouldered Hawks seen on 4 February by Mrs. Maxie Swindell that appeared to be migrating. Conspicuous flights of blackbirds and Starlings going to and from roosts began to diminish in February, and the first Redwing seen displaying over a marsh was on 9 March.

JAMES T. TANNER, University of Tennessee, Knoxville.

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KINGSPORT. — To us as to many other communities the past unusually cold winter brought White-winged Crossbills for the first time. They were first seen by Mrs. M. J. Adams in a heavily coned Red Spruce on her lawn 1 Feb. Thereafter through the second week of March various local members along with Mrs. Adams observed the birds, usually in or near the spruce or in nearby hemlocks. These birds always seemed unafraid so that it was possible to approach within about six feet of them.

The White-winged Crossbills were the chief reward of our observations during a winter of unrelieved cold and long-lasting snows starting as early as 13 Nov. From the first week of January, at the time of our last report, until the middle of March I observed the same species of ducks in approximately the same areas: Mallards, Black Ducks, Ring-necked, Goldeneye, and Bufflehead. At both the State Park and Boone the last week in February brought Hooded Mergansers and American Widgeon which remained through the first two weeks of March. Also wintering at the State Park and Boone below the dam were Pied-billed Grebe and Great Blue Heron. Resident in my yard each night throughout the winter was a Tufted Titmouse snugly sheltered in a coconut shell which had been hung as food for Chickadees. In January it retired before four o'clock in the afternoon, but as the days grew longer he came to his shelter later and later each evening.

So far our only spring migrants have been eight Rusty Blackbirds which I saw in beech trees above the flooded valley of Reedy Creek on 14 March.

MRS. ROBERT M. SWITZER, 1620 Fairidge Place, Kingsport, Tenn.

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BRISTOL. — February captured the spotlight for the Bristol area and with the exception of limited observation for a few days in January; this leap-year month made history with area observers. Weather conditions were not particularly severe but snow fall and precipitation were slightly above normal. The average monthly temperature was six degrees below normal with an overall average of approximately three degrees above freezing. Snow came at unusual frequency with a monthly total of 11 inches. Accumulations of one inch on 6 Feb. and three inches on 28 Feb. were our heaviest reports but all melted within a matter of hours.

It has definitely been a northern species winter, in this corner of the state, and the White-winged Crossbills stole the show with good identifications coming from one Tennessee locality and two additional observations just over the state line in Virginia.

On the morning of 1 Feb., Mrs. Earl Francisco, and a number of friends, observed a flock of crossbills at her home in Bristol, Tennessee. A large flock of nearly fifty birds fed from the cones in her pine trees and were observed within twenty feet. She reports that about 30 of these birds were Red Crossbills and 12 or 15 were easily identified as White-winged. Many males of both species could be observed in the same tree and the white wing-bars were readily distinguishable. Females were present in the flock and observations for the White-winged continued on 2, 3 and 4 Feb. Six to eight Red Crossbills were again seen on 29 Feb.

From Virginia, Mr. Carl Fleenor, a very reliable and experienced Abingdon observer, reports additional flocks of White-winged Crossbills at Mrs. Edgar Umbarger's residence in Damascus, Va. on 11 Feb. At Holston, Va. he again identified another flock on 17 Feb.

There is a single record of a male Evening Grosbeak drinking from a mud puddle with four Starlings on 12 Feb. (WC).

Pine Siskins have been present all winter with many observations from various areas. Recent sightings include birds at: Damascus, Va. 11 Feb. (CF, EU); Holston, Va. 17 Feb. (10) (CF); 50 at Backbone Rock, near Shady Valley, 16 Feb. (HN); 15 at South Holston Dam 29 Feb. (WC). Purple Finch have been reported from most feeding stations and have been constantly present in numbers from two or three individuals up to flocks of nearly a hundred.

South Holston Lake had a good population of ducks until the waters began to freeze in January. Recently numbers have been very low with the following species listed for a field trip on 29 Jan.: Common Loon (1), Mallard (4), Black Duck (3), Bufflehead (2), and Hooded Merganser (2). The Great Blue Heron was present with a single bird on 29 Jan. and 1 Feb.

Additional records of interest include: Turkey Vultures (20) soaring near Painter Creek Dock 1 Feb.; a dozen Ring-billed Gulls on South Holston Lake the same date; the winter observance of the Red-headed Woodpeckers continued with a single bird on 28 Jan. and 8 Feb.; the large congregation of Crows at the lake were still in good numbers with the last large flock being about 500 on 29 Jan.

Robins were scarce with only one record prior to February, but during this month the number has grown considerably. Brown-headed Cowbirds, a species that winters here in large flocks, are abundant as flocks of several hundred are not uncommon. The Common Grackle has wintered here for the first time since I can remember. Several large flocks were reported during the winter, but since 28 Jan., when I observed a flock of 200 in neighboring yards, the numbers have increased rapidly.

Contributors: Carl Fleenor, Mrs. Earl Francisco, Herbey Nunley, Mrs. Edgar Umbarger, Enno vanGelder.

WALLACE COFFEY—508 Spruce St., Bristol, Tennessee.

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ELIZABETHTON. — The past season has been most interesting in this area. As usual, fairly regular coverage has been given to four local TVA lakes, Boone, Watauga (mostly Roan Creek area), Wilbur and Patrick Henry (below Boone Dam near the islands) during the past season to ascertain the wintering populations of waterfowl. The following records on each were noted: Boone: Horned Grebe (6) only on 8 Feb.; Pied-billed Grebe (1) 19 Jan., (1) 26 Jan., (2) 8 Feb.; Great Blue Heron (1) 25 Jan., and (17) 8 Feb.; Mallard (60) 19 Jan., (4) 25 Jan., and (18) 8 Feb.; Black Duck (275) 19 Jan., (152) 25 Jan. and (100) 8 Feb.; American Widgeon (5) only on 8 Feb.; Ring-necked Duck (25) only on 8 Feb.; Canvasback (4) only on 25 Jan.; Lesser Scaup (2) 19 Jan. and (70) 25 Jan.; Common Goldeneye (50) 19 Jan., (80) 25 Jan. and (150) 8 Feb.; Bufflehead (1) 25 Jan. and (12) 8 Feb.; Hooded Merganser (1) 25 Jan. and (4) 8 Feb.; Red-breasted Merganser (1) only on 25 Jan. Patrick Henry: Pied-billed Grebe (1) only on 19 Jan.; Mallard (6) only on 19 Jan.; Black Duck (73) only on 19 Jan.; Gadwall (13) 19 Jan., (1) 25 Jan. and (20) 8 Feb.; Common Goldeneye (1) only on 19 Jan.; Bufflehead (2) only on 19 Jan.; Hooded Merganser (1) only on 19 Jan. Watauga Lake: Horned Grebe (8) 26 Jan., (32) 9 Feb. and (6) 23 Feb.; Pied-billed Grebe (1) 26 Jan. and (1) 9 Feb.; Mallard (75) 26 Jan., (50) 2 Feb., (10) 9 Feb. and (1) 23 Feb.; Black Duck (125) 26 Jan., (215) 2 Feb., (300) 9 Feb. and (175) 23 Feb.; Gadwall (2) only on 9 Feb.; Common Goldeneye (20) 26 Jan., (40) 2 Feb., (40) 9 Feb. and (25) 23 Feb.; Bufflehead (3) only on 26 Jan.; Oldsquaw (2) only on 26 Jan.; Hooded Mergenser (2) 26 Jan., (4) 2 Feb. and (2) 9 Feb.; Common Merganser (8) 26 Jan. and (8) 9 Feb. Wilbur Lake: Ring-necked Duck (20) 25 Jan. and (1) 2 Feb.; Common Goldeneye (1) 25 Jan. and (1) 2 Feb.; Bufflehead (6) 25 Jan. and (5) 2 Feb.

The only hawks reported were one Red-tailed on 29 Jan. and one Cooper's on 5 Feb. An adult Bald Eagle was present at Watauga Lake 26 Jan., 2 Feb. and 9 Feb. Eight American Coot were on Boone Lake 25 Jan. Few gulls were present during the past season. Herring Gulls (1) on Boone Lake 25 Jan. and (6) 8 Feb. plus Ring-billed Gulls (3) present on 25 Jan. and (16) 8 Feb.

Brown Creepers have been noted throughout the period. At lower elevations the number of Red-breasted Nuthatch seem to have diminished. The number of Golden-crowned Kinglets (3) appeared to drop off at lower elevations during the period being recorded only 26 Jan., (1) 1 Feb., (2) 8 Feb. and (2) 9 Feb. Ruby-crowned Kinglets (1) were only noted on 3 Feb. and (1) 22 Feb. Cedar Waxwings have not been common during the season (7) being found only on 25 Jan., (180) 26 Jan. and (1) 9 Feb.

The birds that have probably presented the most spectacular display this winter have been the Fringillidae from the north. Evening Grosbeaks have been seen regularly in town during the season with the largest number counted (131) on 20 Feb. Pine Siskins have been fairly well distributed throughout the area with the largest flocks amounting to about 100. Records of the Red Crossbills (13) have been made on 2 Feb. and (2) 8 Feb. Fred Behrend also had the Red Crossbills on Stone Mountain in January and Lynn Mountain in February. Probably the most impressive records have been of the White-winged Crossbills. There were about 50 present in January in the usual place on Roan Mountain (FWB), plus also the other northern birds recorded earlier (**34**;93, 1963). R. L. James, Mountain Home, reported the White-winged Crossbills showed up there in January (no exact date) and they were present continuously for 26 of the 29 days in February. On 10 Feb. he had at least 100 of the birds present, but usually their number would fluctuate. On each of his observations they were feeding on the cones of the Eastern Hemlock *(Tsuga canadensis)* never on the Carolina Hemlock *(Tsuga caroliniana).* In contrast to the above, there have been only a few scattered records of the Purple Finch.

Of interest is also the record of a single Savannah Sparrow at the County Farm on 2 Feb.

Contributors: John Barnitz, Fred H. Behrend, K. H. Dubke, Lee R. Herndon, Henry E. Parmer, Charlie Smith.

KENNETH H. DUBKE, 918 State Line Road, Elizabethton, Tennessee.

## ROUND TABLE NOTES

RED CROSSBILLS IN GREENE COUNTY. — While picnicking early Saturday afternoon on 31 August, 1963 in the Lower Paint Creek Recreation section of the Andrew Johnson Wildlife Management Area in south Greene County, one of our party noticed a bird feeding among the low limbs of a rather large Hemlock tree approximately fifty feet away. So far in the hour or so we had been there, we had neither seen or heard any evidence of bird life. Always looking for 'something different' the writer focused binoculars on this arrival and found it really was different — a sort of dull brick red with darker wings.

Since we had not seen one like it in the area on our many previous outings, we both left the table to observe it more closely. As it moved up into higher limbs, we discovered another Red Crossbill *(Loxia curvirostra)* — a rather drab olive colored female clinging to small branches about thirty-five to forty feet up and working on the tiny Hemlock cones. Their crossed bills were clearly visible as they continued feeding, apparently quite unconcerned about our interest in their activities.

After watching them for perhaps twenty minutes we searched the trees in the area for others, but were not successful in finding any.

To the present knowledge of chapter members, this is the first record of Red Crossbills in Greene County.

ELVA DARNELL, Route 4, Greeneville, Tenn.

GOLDEN EAGLE IN EASTERN ARKANSAS. — Recently, while hunting in Eastern Arkansas not far from Memphis, a boy found an injured Golden Eagle. He captured the bird and took it to Marked Tree, Arkansas, and turned it over to the Peace Officer who got in touch with Cleveland Cabler of the Audubon Society in Little Rock and who is also a member of the T. O. S., and he made arrangement with the Little Rock Zoo to receive the Golden Eagle. A permit was secured from the Federal Fish and Wildlife to keep the bird. Now this immature Golden Eagle is being nursed to a normal life and may be seen in the Zoo. It may be of some interest to note that 137 Bald Eagles were counted in Arkansas during the 1963 Census sponsored by the National Audubon Society TO SAVE THE BALD EAGLE.

CLEVELAND CABLER, 2504 Battery Street, Little Rock, Ark.

BLUE GROSBEAK NEST IN BASIN SPRING AREA. — A year ago we reported seeing an adult Blue Grosbeak *(Guiraca caërulea)* feed a young bird out of the nest to establish the first breeding record of the species for Middle Tennessee (MIGRANT: **33**, 72, 1963). This year, 30 June, 1963, I found in the same area a nest containing 3 eggs. Behavior of a female Blue Grosbeak suggested she might be near a nest. She was watched as she returned to her nest and was then flushed from warm eggs.

The nest was about 30" from the ground, tied to stalks of elderberry growing on a short steep bank that sloped from a country road to a pasture. The bank faced east and was heavily overgrown with blackberry, elderberry, goldenrod and poison ivy. The compactly constructed nest was made largely of weed stems with a strip of snake skin hanging from the bottom. The slender-oval eggs were pale blue like faded blue denim.

Both the male and female birds were closely attendant to the nest. They were often on nearby utility wires or a wire fence. Observations inside the nest were infrequent so as to disturb the birds as little as possible. On 10 July at least 2 nestlings were gaping but silent. On 13 July the nest and its elderberry support were toppling and only one nestling remained. The nest and its support were secured upright and the young bird was banded. The nest was empty on 20 July without any indication of mishap but the young bird was never absolutely identified later.

There was indication of possible 3 pairs of Blue Grosbeaks in the general area during the 1963 breeding season. Two records of a female and one record of a male were made about 3 miles from the above described territory. In the nesting area 2 males were observed in terrific chasing that seemed to be territorial contention on 25 June. A female present at this time flew away in exactly the opposite direction from the later discovered nest. This female was observed a number of times but never seemed in any way associated with the known nest. This suggested two contiguous territories occupied by mated pairs and a possible third territory about 3 miles away.

KATHERINE A. GOODPASTURE, 3407 Hopkins Lane, Nashville, Tennessee.

## BOOK REVIEWS

THE MIGRATIONS OF BIRDS. — By Jean Dorst, Curator of the Division of Mammals and Birds, The National Museum of Natural History, Paris. Houghton Mifflin Company, 2 Park St., Boston, Mass. P. 467; $6.75.

The movements of birds has intrigued man from the earliest times. Their disappearance at a given season and their reappearance at another has posed a baffling question, resulting in many theories regarding their departure and return. Why, how, when and where were questions which needed satisfactory answers.

Various species of birds migrate differently, that is, from and to different areas, some at night, some during the day, while others travel both day and night; some in flocks of a single species while others of a single sex or mixed species, still others migrate singly. Some species do not migrate at all, that is, they may spend their entire lives within a radius of a few miles of the location where they were hatched. Others may travel relatively short distances or may make altitudinal migrations or spend the summer at high altitude and the winters at lower elevation while still others may migrate hundreds or even thousands of miles.

Much has been learned about the movements of birds by various experiments. The keeping of accurate records of arrival and departure dates, observations of movements, noting flight directions against the moon, following flight direction and speed in airplanes, banding and recovery records and most recently radar techniques have revealed much about the migrations of birds.

Many examples of the various types of migrations are presented with charts and graphs to show the great variety and variations in migrations. The effects of natural phenomena, such as the weather, temperature, atmospheric pressure, wind, fog, clouds and rainfall; geographical features such as the mountains, streams, plains, deserts, coast lines and open water, as well as food, all appear to have profound influences on migration.

The urge to migrate, adaptations, orientations, routes and many other phases of bird migrations from all over the world are discussed in the light of the most recent information available.

In addition to the many illustrations, maps and graphs there is a bibliography of more than fifty pages listing only the more important references to this subject, an index of the birds, geographical index and biographical index.

This is a fascinating book to read and for those who are interested in pursuing the subject further, most of the important literature is listed. Also there are many suggested phases of migration upon which one could do research and add more valuable information to the subject. For anyone with more than a casual interest in bird migration, this would be a valuable addition to a private library or certainly an excellent reference work for a public library.

LEE R. HERNDON.

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NOTES ON THE BIRDS OF GREAT SMOKY MOUNTAINS NATIONAL PARK. — By Arthur Stupka. 5½" X 8½"; paperbound; 242 p. The University of Tennessee Press, Knoxville, Tenn. 1963, $3.00.

The introduction describes the area with respect to topography, geology, climate and flora, particularly where related to the birds as well as the ornithological work done prior to 1935 when the author became Park Naturalist. The main portion of the book, consisting of approximately 200 pages, is devoted to the more than 200 species of birds which have been reliably recorded within or very close to the park boundaries. Most of the data are taken from the notes of the author, although he has drawn from many publications of well known ornithologists who have visited the area. Many records of species rare to the park have been picked up as casualties along the highway where the birds have been overtaken by foul weather and were unable to make their way over the mountain.

No descriptions of birds are given but specific dates of observations, particularly of the rarer species and migrants, as well as their habitat, behavior, nesting activity, young, song, abundance and elevations are given.

The appendixes list the more important localities of the area with their approximate elevations; the contributors mentioned in the text; a long list of references cited in the text; common and scientific names of plants mentioned in the text and a species index. All of these make the book very useful as a ready reference to most of the species which have occurred in eastern Tennessee and western North Carolina. Any bird student anticipating a visit to this area will certainly want to secure a copy of this book. Members of our state T. O. S. and members of bird clubs in adjoining states should have it in their library.

LEE R. HERNDON.

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NAMING THE BIRDS AT A GLANCE. By Lou Blachly and Randolph Jenks. A guide to the Eastern Land Birds from South Carolina west to the Rocky Mountains and North to the Arctic. Guide Drawings by Sheridan Oman. Published by Alfred A. Knopf, New York, 1963. P. 331. $3.95.

A color pattern guide is included just inside both the front and back covers. When a land bird is sighted by a beginner there is usually some immediate characteristic which stands out prominently and will assist greatly in classifying the bird. If a ready reference is available, such as this book, the few details observed would be sufficient to classify the bird and lead to the identification. Although the many illustrations are in black and white the text is based on color differences and the color patterns are indicated in the drawings. Relative sizes are indicated providing ready comparisons with familiar birds and birds possessing similar patterns are illustrated on the same or adjacent pages. Where the feature resembles one species in one characteristic and a different species in another, both are illustrated in another section. Thus a bird may be illustrated several times in pointing out the several similarities of other species.

In addition to the color characteristics and size which are indicated in the drawings the text lists other features which assist in clinching the identification, such as habits, habitat, sex differences, voice or song, nest and range.

The greater portion of the book is devoted to the smaller land birds but sections are devoted to smaller groups possessing special characteristics such as the woodpeckers, soaring, skimming insect hunters in flight, ground birds (chicken like), owls and hawks, eagles, vultures, crows and ravens. Most of the last group are illustrated perched and in flight.

The book is of convenient size to carry in the field and would be especially useful for beginners. It should be brought to the attention of friends who have had little or no experience in birding or better still it would make a very appropriate gift to young prospective birders.

LEE R. HERNDON.

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*The simple truth about birds is interesting enough;
it is not necessary to go beyond it.*

## ARTHUR A. ALLEN, 1885-1964

Arthur A. Allen, Emeritus Professor of Ornithology at Cornell University, died after a brief illness on January 17, 1964. His was an active life devoted largely to the study of birds.

He was born in Buffalo, New York, in 1885. His affiliation of almost a lifetime with Cornell University began when he went there as an undergraduate student in 1903. He was appointed an Instructor before he had completed his doctoral work, and there he became the first Professor of Ornithology in the country. In 1953 he retired to the position of emeritus professor, but he then devoted his energies to the building and direction of the Laboratory of Ornithology in a remarkable building and preserve at Sapsucker Woods a few miles from the Cornell campus. He was active there until a few days before his death.

He accomplished a number of "firsts" in the science of ornithology, but his two greatest accomplishments were his bringing knowledge of birds to a large public and his training of more students in the field of ornithology than probably any other single man. The first he accomplished by his writing of books and magazine articles, lecturing with his motion pictures of birds, which he did several times in Tennessee, and by his work with his associates in the sound recording of the songs and calls of birds and other wild animals. The number of professional ornithologists who received at least part of their training with him is astounding. At meetings of the American Ornithologists Union it used to be customary to hold a Cornell get-to-gether, when it seemed as though at least half of everyone attending the meeting was there. And, of course, an even larger number of students were in his courses who had different careers ahead, some related to ornithology, as wildlife management, and others with bird study as an avocation.

"Doc" Allen impressed all knowing him with his cheerful persistence when things went badly and his relaxed enjoyment of his successes. He will also be remembered personally for his eternal interest in birds and his consideration of people.

JAMES T. TANNER.

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## NOTES ON A PIGEON HAWK, PINE SISKINS, RED AND WHITE-WINGED CROSSBILLS IN A CEMETERY

### By JAMES M. CAMPBELL

Most every winter brings at least one rare bird sighting in virtually every general area in Tennessee, but when three rare species are found in a very small area and remain there for several weeks, enabling dozens of bird enthusiasts to view them at close range, it must be considered a banner winter season for even the most experienced and sophisticated birder.

The three rare birds were the White-Winged Crossbill (*Loxia leucoptera*), the Red Crossbill (*Loxia curvirostra*) and the Pigeon Hawk (*Falco columbarius*) along with the somewhat more common Pine Siskin (*Spinus pinus*). The site of these observations was Lynnhurst Cemetery, which is located five miles due north of downtown Knoxville.

Fred Behrend's report of eighty-eight White-Winged Crossbills seen on Roan Mountain in late December, 1963, captured the interest of the Knoxville Chapter of TOS in view of the impending Christmas bird count in the Great Smoky Mountains National Park. It was felt that the northern invaders could well have extended their range farther south along the mountain chain. Such was the case, since observations were made near Newfound Gap on 28 and 30 December by park personnel and on count day, 29 December, by Mr. & Mrs. George Wood of Knoxville.

Encouraged by these sightings, my wife and I made several trips to Newfound Gap and vicinity, but found no White-Winged Crossbills. During a trip to Cove Lake State Park on 4 January, 1964, to view ducks and geese, we were startled to see a female White-Winged Crossbill feeding in a pine tree. Trips made by other birders to this same location proved to be fruitless in spotting any crossbills. On 31 January Mrs. Campbell saw a male and female White-Winged Crossbill eating hemlock seeds in our yard in north Knoxville. This observation was possibly the first in Knox County history. One unconfirmed report was made a week earlier from a location which may have been in Anderson County.

A statement in Pough's **Audubon Land Bird Guide** that these birds frequent hemlock trees when they come south, plus the yard observation, started our thinking in terms of where was the largest nearby concentration of hemlocks. The obvious answer was Lynnhurst Cemetery, which is located one mile from our home. The next morning, 1 February, we found two females and one male White-Winged Crossbill within five minutes after entering the cemetery.

Members of the Knoxville Chapter of TOS were immediately notified and several persons made unsuccessful searches of the area for the crossbills during the weekend. One observer did manage a fleeting glimpse of one individual. Four of us were about to give up for the day (2 February) when a 'Sparrow Hawk' flew from out of nowhere into a hemlock tree directly over our heads. It soon flew into an adjacent tree and remained in

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full view long enough to permit us to realize that our bird was not what we had supposed, but was in fact a Pigeon Hawk. The breast streakings, lack of facial 'sideburns', lack of rufous back and tail, plus the presence of tail banding and pointed wings when the bird flew, ruled out the Sparrow Hawk or the Sharp-Shinned Hawk. The finding of this bird, which was only the second report in Knox County history, was more than ample compensation for the failure of the group to locate the crossbills.

During the next week several members of the local club recorded the presence of the White-Winged Crossbills and the Pigeon Hawk in the cemetery; and on Saturday, 8 February, we located six or seven Red Crossbills feeding on hemlock seeds. Only five reports of Red Crossbills had been recorded in Knox County as of 1957, per **Birds of Knox County** by Howell and Monroe.

During the observation period at least thirty Knoxville TOS members and at least fifty other persons seen by the writer, visited the cemetery to see these birds. TOS member J. B. Owen's bird column in a Knoxville newspaper reported the crossbills. The column brought out many other observers not mentioned above, according to the cemetery owners, Mr. & Mrs. W. C. Baker. Without Mr. & Mrs. Baker's willing permission, we would not have been able to spend so much time in the cemetery during the winter.

The cemetery itself is generally square with each of the four boundary lines approximately one-half mile in length. The southern end is bounded by a creek and a small lake and the eastern by another stream. One-third to one-half of the area is characterized by rows of eastern hemlock trees (*Tsuga canadensis*) which were planted thirty to fifty feet apart in each direction. Most of these trees were planted in the 1920s and 1930s and have average heights of thirty feet and trunks of eight to twelve inches in diameter. Some of the rows were planted in the 1940s and 1950s and obviously are much smaller. Most of the other cemetery area is comprised of fields, and also sections with rows of other ornamental type trees.

The following is a listing of various observations made by the writer concerning behavior and feeding habits of the White-Winged Crossbills and Red Crossbills and the comments will apply to both species unless otherwise indicated. This information is based on sightings on eleven days between 1 February and 22 March, 1964, of the White-Winged Crossbills; and on seven days between 8 February and 15 March, 1964, of the Red Crossbills. All but one of these days were on weekends. At least one visit to the area was made on all but two weekend days during the period.

The crossbills were extremely difficult to locate except by hearing their call notes which usually were given at the exact moment they began flying. Only occasionally were the notes given while the birds were in a tree or on the ground. The notes were also given on the wing. When the birds were not eating they almost always were found inside near the hemlock trunks as opposed to most avian species' habit of perching on outside branches or twigs. This was the greatest factor in explaining the difficulty of finding the crossbills. I wonder if this practice was explainable by the Pigeon Hawk's presence or was typical of crossbill behavior.

Every person who discussed the crossbills with me agreed that the most interesting and enjoyable aspect of their behavior was their approachability. By moving slowly and quietly one could approach to within four to six feet of a crossbill which was busily engaged in extracting seeds from the hemlock cones. Once I attempted to touch one by slowly moving my hand toward it and was within six inches of it before the bird flew. Crossbills which were not eating would not usually allow persons to get closer than fifteen or twenty feet. The Red Crossbills appeared to be the slightly less approachable of the two species. Neither species seemed to be bothered by the cemetery grave visitors.

On only two occasions were the two species of crossbills intermixed into one flock and only on seven instances were the White-wingeds in a Pine Siskin flock. Only a single mixture of Red Crossbills and Pine Siskins was seen. The White-winged flock numbers ranged from one to twenty with an average of approximately seven and the Reds from one to fifteen with an average of approximately six.

The crossbill flocks were invariably confined to one tree at a time and when they flew out of a tree they generally flew away at least a hundred yards or more rather than into adjacent trees. It could not often be determined where the birds stopped since they usually flew so far away, and/or the close trees obscured the viewer's vision. On the few occasions when the crossbills were seen flying into a tree they usually would alight about two-thirds of the way up. While feeding in the tree they systematically worked their way around the periphery of the tree and usually spiraled downward and then back upward. The flocks seemed to prefer staying in a fairly compact group as opposed to being spread out over the tree. The birds often dropped to the ground to eat hemlock seeds that had fallen out of the cones, but were much more often seen in the trees.

Since eastern hemlock cones are among the smallest of all tree cones, they grow on very small branches or twigs. This causes the crossbills to often hang upside down in Chickadee fashion in order to get to the seeds; otherwise the birds' weight would cause them to fall off the branch. As various writers have suggested, the crossbills resembled miniature parrots as they went about their feeding.

Anyone who has been interested in crossbills must have heard that their bills are crossed as a special adaptation to help them eat certain conifer seeds. I was particularly anxious to see what effect the crossed-bills had with the hemlock seeds and cones. As far as it could be determined the bill did not seem to help the birds at all. At least it appeared that the Pine Siskins could extract the seeds much more quickly; but everything the siskins did was in a faster manner, suggesting that they have a higher metabolic rate than the crossbills—so perhaps this comparison is not a valid one. In the final analysis it was not possible for me to really tell what effect the crossed-bills had in hemlock seed extraction and eating.

It was observed that the crossbills used their feet a great deal in holding the cones. One foot would usually be used to hold onto the twig and the other one to pull the cone to the proper position for the bill to enter. The Pine Siskins did this occasionally in a somewhat similar manner, but not nearly so often.

On every visit to the cemetery a couple of dozen cones were checked for seed availability—on a few random trees—and from about mid-February on the seeds began getting less and less plentiful. It seemed likely that the crossbills and siskins would have to leave the vicinity to find other food. This possibility seemed even more likely after reading in **Knowing Your Trees** by Collingwood and Brush that it takes 400,000 of these one-sixteenth of an inch long eastern hemlock seeds to weigh one pound. The fact that the crossbills did remain for over another month indicates that they are certainly better seed finders than are humans (which didn't surprise me).

The night time roosting sites of the crossbills could not be determined, but the fact that on several mornings, at or near dawn, they were heard or seen flying in from Greenway Ridge at the south side of the cemetery; and that on two days, late in the afternoon, they were seen flying to the ridge, indicates that they might have spent at least several if not all of their nights there. The ridge would have offered more protection from the wind than the relatively level and open cemetery. There are a few dense evergreen trees on the ridge which could have been roosting sites.

The presence of the Pigeon Hawk in the cemetery not only was interesting and stimulating from the standpoint of its rare status in Knox County and East Tennessee, but also added an element of drama and suspense to each visit.

Bird writers have written that the Pigeon Hawk is a bold, fearless, and unsuspicious bird and that it is probably the most curious and inquisitive of all the raptores. These two groupings of adjectives appear to contradict each other, yet during the hawk's 2 February to 21 March period of observation (during which I saw it on eleven different weekend days) it exhibited nearly all of those characteristics. Several times other observers and the writer were within fifty feet of the Pigeon Hawk while it was perched and many times it flew within twenty-five feet or less while pursuing some quarry. On several other occasions it flew towards me to within a few feet and then veered away and landed in a tree two or three hundred feet away as if it were investigating the reason for my presence. Another time I was driving on a cemetery road and saw the bird on the ground about thirty feet from the pavement. I stopped the car and the Pigeon Hawk actually walked a few steps toward me before flying away. After about two weeks from the first time I saw the hawk it began to stay farther away from me except that it would still fly close by while chasing a bird. It would also permit my approach within one hundred and fifty feet, but only when it was in a favorite perch high up in a tall oak tree on the edge of the cemetery. The reason for the increasing shyness was not known, but it is possible that warmer weather was bringing more cemetery grave visitors or perhaps some individual might have shot at it. We all took special care not to advertise the hawk's presence to anyone whom we suspected might be likely to harm it or who might tell someone else who might dislike hawks and attempt to shoot it.

During the observation period at the cemetery I saw the falcon make over forty attempts to catch birds in the area. Seen were two attempts against Red Crossbills, five against White-Winged Crossbills and over thirty against Pine Siskins. Not a single attempt appeared to be successful. A few incidents occurred where trees blocked my vision at the critical moment, thus the result of the strike could not be determined. Some other strikes happened so rapidly that their results were not known.

I had previously thought that either the Peregrine Falcon or the Pigeon Hawk could catch most birds with consummate ease and was astounded at its apparent repeated failure to catch the cemetery birds. Not until I reread some passages in Bent's **Life Histories of North American Birds of Prey** did my amazement lessen. One passage reads "the flight of the pigeon hawk is swift and dashing, like that of the larger falcons. Its trim body is propelled at tremendous speed by the rapid motion of its long pointed wings. Few, if any, birds can escape it in straightaway flight; even the black swift, one of our fastest flying birds has been captured by it. But the prowess of this and other falcons has been somewhat overestimated by admiring observers, it is not always successful, and it often fails to capture birds of much slower flight that are skillful at dodging." Another incident in Bent's work refers to a Pigeon Hawk attempting to capture one of a flock of Blue Jays, "in spite of his swift and spectacular dashes, the falcon always failed, as the jay always succeeded in dodging or dropping into a treetop, where the falcon did not attempt to catch it; a sharp-shinned hawk would have dashed in after it."

These two accounts, I believe, closely parallel the cemetery situation in that the siskins always darted very quickly one way or the other to dodge the hawk and then flew into a nearby hemlock. Every attack I witnessed occurred when the intended victims were either feeding on the ground or were in the air. The Pigeon Hawk rarely approached when the birds were feeding in a tree. The normal flight of the siskins was always in a rapid zig-zag pattern. Their flight reminded me of the 'roller coaster' flight of the goldfinch except that the siskin's 'roller coastering' was on a horizontal plane. This flight pattern alone would tend to make it difficult for any raptore to capture a siskin. The crossbills' habit of staying in the trees more and doing less dropping to the ground, as well as less flying from one tree to another, served to protect them somewhat from the hawk.

The Pigeon Hawk's attack pattern usually started with it leaving its perch, which was possibly within sight and presumably within hearing distance of the siskin's, and then coming in at about tree top level until it approached within fifty feet of the siskins, it would dive suddenly toward the ground, by which time the siskins would usually be about a yard or so off the ground. Many attacks occurred so quickly that all I could see would be a whir of wings going in all directions. This was particularly true when the hawk was coming from behind me. The falcon's usual habit of landing in a near-by tree immediately after an attack enabled me to determine that those particular attacks were not fruitful. The hawk's dives were invariably so fast and so zig-zagged as to preclude the use of binoculars.

Paul Pardue of Knoxville reported the only successful hawk attack. Mr. Pardue first watched the bird eat a Starling, but did not see the kill. About thirty minutes later the falcon came from behind Pardue and took a dive into the middle of a flock of ground feeding siskins. The dive was a success and the falcon made an abrupt turn a few feet after making its catch and flew back in the same direction from which it came. Pardue was able to see the bird as it flew away with the siskin held in its talons.

It is ironical that my only observation of a successful attack was that of one by a Sparrow Hawk. While sitting in the car watching a group of siskins eating seeds on the ground by the last row of hemlocks on the northeast cemetery corner, I was completely engrossed in the manner in which the siskins were 'leap frogging' each other and thereby had moved over a hundred feet. They reminded one of an incoming ocean wave in slow motion. When the 'wave' was within approximately twenty feet of the car a small hawk flew from behind the car, captured a siskin and flew straight to a beech tree one hundred and fifty feet away. A look through the binoculars showed that the hawk was not the Pigeon Hawk but a Sparrow Hawk. The sideburns and rufous back were clearly visible. This was the only time I saw a Sparrow Hawk in the hemlock area during the entire months of February and March.

The very fact of the Pigeon Hawk's continued presence indicated that it was at least occasionally successful in siskin attacks, particularly in view of the report that their diet consists mainly of birds. The cemetery siskin population decreased from approximately 500 at the beginning of February to approximately 150 at the end of March. To what extent the Pigeon Hawk contributed to this decline is of course problematical. At least two Loggerhead Shrikes were usually in evidence in the area and, along with the Sparrow Hawk, may have taken a few siskins. It is perhaps most likely that the primary reason for the siskin decrease was the decline in hemlock seeds.

Not once did I hear the falcon's voice during the entire period nor did it ever hover (which it reportedly occasionally does) in Sparrow Hawk fashion. On one occasion I observed the bird soaring high in the sky in typical buteo style. The bird appeared so strange that it was difficult to identify until it got much lower.

The area was checked on 27, 28, and 29 March as well as 4, 5, 11 and 12 April with no crossbills or Pigeon Hawk sightings. The Pine Siskins remained in gradually diminishing numbers until only fifty were found on 25 April, the last day on which I made a thorough search of the area.

15 Hedgewood Drive, Knoxville 18, Tennessee.

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# SOME FIELD NOTES FROM REELFOOT LAKE, TENN.

### By ALBERT F. GANIER

Our TOS meetings at Reelfoot, the great earthquake lake of 1811, are always of particular interest because of the colorful territory and distinctive birds to be found on field trips. The lake's shorelines are fringed with picturesque old cypress trees surrounded by their myriad "knees," while others, standing off-shore in waist-deep water, are stopping and landing places for many local rarities.

Just a few miles westward lies the great mile-wide Mississippi river and alongside its levees we found the borrow-pits and sloughs to be a rendezvous for the herons and transient shorebirds. Here, among the many sandpipers and yellowlegs, we found a dozen Golden Plovers, some of which had already changed to their breeding plumage which included black bellies and white cheek lines. Other Goldens were found in cut-over hay and alfalfa fields, to the number of forty or more.

The viewing of a Mississippi Kite was the objective of many of our members who had as yet to record it for their life lists. The parties led by Ben B. Coffey were successful in this quest when he took them to the end of the Checking Station Road, where he had seen a pair in other years. Sure enough, two of the birds soon put in an appearance and were watched as they carried twigs to a nest built high in the branches of a large sycamore in the woods. Not far away, the rare Swainson's Warbler was heard singing and other parties heard and observed a total of twelve of these rare dwellers of the swamplands.

In the sloughs and flying over were seen both Great Blue and Little Blue Herons, Common Egrets, Night Herons and a single Snowy Heron.

The famous heronry or "Crane-town" at the head of Big Ronaldson arm, is said to have been deserted and the boat channel leading to it is now blocked. An old and smaller colony at the north end of the lake is again developing but lack of time and equipment prevented a wade-in investigation.

Those who followed the levee road northward, west of the lake, were treated to a view of a dozen Fish Crows which had been following a disc plow but which finally arose and circled at a great height while giving vent to their peculiar nasal calls. While viewing some herons feeding in a slough, the group was treated to a view of a fully mature Bald Eagle flying toward the lake, presumably from the Mississippi river. Fish and Game Department attaches at the lake informed us later than none of the several old nests known to them were occupied this season.

The bottom lands west of the lake are wonderfully fertile and closely cultivated. Along the roads thru this area, one is rarely out of sight or hearing of Dickcissels, while the clover and alfalfa fields produced many flocks of migrating Bobolinks. On Saturday afternoon, 2 May, a group drove twenty miles southward to visit the heronry located a short distance north of Dyersburg. (**Migrant**, 1960, 31:48-49). Although a housing development has encroached close to the small wooded area, the Little Blue Herons are still breeding there in numbers together with a few Great Blues and Common Egrets. Of greatest interest here was the observing of a Cattle Egret in the heronry. In a wet field a short distance away, a considerable flock of these birds were reported feeding, presumably nesters in the heronry.

On Sunday morning, field trips were taken to the north-east part of the lake area, radiating from Walnut Log. Those who followed the road southward from there into the Refuge Area compiled a good list of birds and found a nest of the Red-shouldered Hawk, fifty feet up in a cottonwood and west of the road. The old birds were feeding at least four young which appeared to be four or five weeks old. A Phoebe was "fussing" about the Biological Station building and is said to have nested there for several years.

Several of us went out into the lake with boats, particularly to see the Osprey nest previously described by John Ellis (**Migrant**, 1963, 34:21-23). We found one bird on the nest and its mate on a snag nearby. The latter visited its mate a few minutes later, carrying a twig. When flushed from the nest, the bird returned as soon as our boat moved away, from which we judged incubation was in progress.

Those who had quarters at the Edgewater Beach motor court, on the south side of the lake alongside "The Washout" channel, found birds all about the grounds including a Baltimore Oriole intent upon tearing threads from an old deck chair with which to build its nest. A small flock of Mallards, reared from eggs of wild Mallards, would feed trustingly at your feet until suddenly "the call of the wild" would cause them to take off for a mile flight over the lake before they would return to domesticity. With them was a Snow Goose, which had taken up with the flock and which also had to take off for a flight every now and then.

The new assembly hall and museum served well as headquarters for activities, as set forth in the Minutes, and with ample motor court accommodations, the meeting was one of the best we have had. The following is quoted from nearby Tiptonville's Lake County Banner: "Ralph Burrus, Reelfoot parks manager, considers the T.O.S. among his favorite convention people, 'They like Reelfoot and like what we do for them here. They are accommodating and they enjoy themselves a great deal. When they leave, they leave happy and have had a good time. I tell you, these are just the nicest people to have around." On behalf of the T.O.S., Mr. Burrus, we appreciate your comments.

2112 Woodlawn Dr., Nashville 12, Tenn.

## T. O. S. ANNUAL MEETING, 1964

The Annual Meeting of the Tennessee Ornithological Society was held on 1, 2 and 3 May at Reelfoot Lake, with the Memphis Chapter as hosts.

An informal reception was tendered the members and guests by the host chapter Friday evening at the American Legion Hall. Registration by those present took place, before the showing of some very lovely pictures by Dr. Arlo Smith of the Memphis Chapter.

Saturday and Sunday field trips were offered into the refuge beyond Walnut Log, along the levee, to the west side of the lake near Gray's Camp, along other roads in the vicinity and to the heronry near Dyersburg. Boats were made available along the Bayou de Chien and from Gray's Camp, for all who wanted them.

Saturday afternoon, the officers and directors met at Ellington Assembly Hall and Museum, for consideration of the Society's business. Mrs. W. F. Bell, chairman of the board, presided. The report of the treasurer showed that the finances of the organization were in excellent condition. The Auditing Committee, Mr. John Ellis, Chairman, reported that the treasurer's report was in good order, and that the Society's holding of 258 shares of M. T. T. stock had been substantiated. The value of this stock is $4250.00, and represents the Society's endowment. It was moved that the report of the treasurer and auditor be accepted. Motion carried.

Reports from the various committees were heard: Mr. John Conder, successor to Mr. Will Hon in carrying on our work of "Birds on the Protected List" was unable to be present, but reported by proxy that his work was going on;

Mrs. E. M. West reported that a new supply of T.O.S. arm badges were available at $1.25 each. These may be obtained by order from Mrs. West, 5511 Dayton Blvd., Chattanooga 17, Tennessee. She urged that all members have at least one of these badges;

In the absence of Dr. Lee Herndon, Mr. Henry Parmer reported that Mr. Ken Dubke would arrange for the issuance of the June **MIGRANT** and probably the September issue. Mr. Ganier mentioned that more Round Table notes as well as regular articles were needed for **THE MIGRANT**, and suggested that they be sent in form suitable for the printer, i.e., typed, double spaced etc.;

A letter of resignation as Editor of the Newsletter was read from Mr. Kirby Stringer. Much discussion followed, with suggestions as to how the work of the editor could be lightened. Motion was made that the Newsletter be issued only once a year, with a second issue in the spring at the discretion of the editor, and that Mr. Stringer be asked to continue in that capacity;

Mrs. E. M. West reported that the committee considering the advantages of affiliation with The National Audubon Society had reached no decision, other than to make a recommendation that TOS send a $25.00 donation to that organization to be used as it sees fit. On motion of Mr. Fletcher Bingham, this recommendation was carried;

Mrs. E. M. West made a motion that a membership list of names and addresses be published in **THE MIGRANT** every three years, at or near the end of the block, beginning in 1964. Motion carried;

Mr. John Ellis made a motion that Life Membership Certificates be sent to present and future Life Members. Motion carried;

Motion was made by Mr. Dixon Merritt that a complimentary membership be given to Dr. Cynthia Counce, Princeton, Kentucky, in appreciation for her gift of a complete set of **THE MIGRANT.** Motion carried. Mr. Ganier requested that members send him copies of **THE MIGRANT** which they no longer need, to replenish our stock. Postage will be paid;

Mr. Fletcher Bingham made a motion that leaflets of information on TOS with application for membership be made available to all chapters. Motion carried. These leaflets are available from the Treasurer;

The matter of making a Summer Count by TOS was brought up for discussion. A motion favoring such a count received a favorable vote and the following committee was appointed to draw up rules and regulations: Mrs. E. W. Goodpasture, Chairman, Mrs. E. M. West, Mr. Henry Parmer, Mr. Albert Ganier;

According to Notice of Amendments sent to all chapters previous to the Annual Meeting, the following amendments to the Constitution and additions to the By-Laws were read, discussed and on motion, approved: (revisions or additions are in parenthesis)

### ARTICLE III

**Sec. 10.** The Treasurer shall collect the dues from all members and receive any other funds that may come to the Society. He shall give attention to maintaining and increasing the membership. He shall pay all bills upon their approval by the President and shall present to the Society an annual statement, as of December 31st (as of May 1st), of all receipts and expenditures. Upon audit by a committee, this shall be filed with the Secretary.

### ARTICLE V

**Sec. 1.** The Society shall hold an annual meeting, each spring, (each May), and the officers shall be elected at this meeting, to assume their duties July 1 (to assume their duties at the end of the business meeting, at which they are elected. The Treasurer and Secretary shall prepare and turn over their records to their successors within thirty days). A fall meeting may also be arranged at such time and place as the Board of Directors may decide.

### BY-LAWS

**DUES.** A member may become a life Member by a single payment of $50.00 to the Society's endowment fund. (Addition: This may be in four consecutive annual payments of $12.50 each). (In case of an advance in Life Membership, a member is to pay only the amount due at the time of first payment.) (Addition: No member who has failed to pay his dues by April 1, shall receive any issue of **THE MIGRANT** beyond the March issue, until such dues are paid).

The preceding to be substituted for the resolution printed on page 34 of **THE MIGRANT,** June 1950, and to be included in the BY-LAWS. (It shall be the duty of the Treasurer to keep the Secretary up-to-date on the membership in good standing).

(Addition: A chapter to be recognized as such, must maintain a membership of ten or more, in good standing).

Mrs. William Puryear, Chairman of the Nominating Committee, presented the following slate of officers for 1964-65:

| | |
|---|---|
| Mrs. William F. Bell | President |
| Mr. Laurence O. Trabue | V. President, Middle Tenn. |
| Mrs. Rose Wooldridge | West |
| Mr. Eugene M. West | East |
| Miss Marguerite McKinney | Secretary |
| Mr. C. E. Wilmeth | Treasurer |
| Mr. Albert F. Ganier | Curator |
| Dr. Lee R. Herndon | Editor |
| Directors at Large: | |
| Dr. James Tanner | East |
| Mrs. James Haile | Middle |
| Mrs. John S. Lamb | West |

The Annual Business Meeting, consisting of Directors and Active members, convened at Ellington Hall following the banquet Saturday night, with the President, Mrs. William F. Bell, presiding.

The minutes of the 1963 meeting were read and approved.

The Secretary reported the business transacted by the Board of Directors, as outlined above. The recommendations of changes in the Constitution and BY-LAWS were read, and on motion approved. The slate of officers recommended by the Board of Directors was read and on motion was likewise approved.

On behalf of the Nashville Chapter, Mr. Albert Ganier extended invitation for the 50th Anniversary Meeting of TOS to be held in or near Nashville in 1965. Mr. John Elson made motion, seconded by Mr. Dixon Merritt that the invitation be accepted by acclamation. Motion carried.

Mr. Ben B. Coffey introduced the speaker of the evening, Mr. Edward J. Meeman, Conservation Editor of Scripps-Howard Newspapers, whose subject was "What TOS can do in the Conservation Movement."

The following resolutions were presented by Mr. Albert Ganier, Chmn. of the Resolutions Committee:

Whereas, the Tennessee Ornithological Society is about to conclude its 49th Annual Meeting of 1-3 May, 1964 at Reelfoot Lake, Tennessee; now, therefore be it resolved that its members here assembled wish to express their thanks and appreciation to the following:

To our President, our Editor, our Secretary and other officers of the Society, who have served us faithfully through the past year and who have been re-elected to serve us during the year to come; to our retiring Treasurer, Henry E. Parmer for having so efficiently served TOS during the past three years and for the excellent report he has placed in our hands showing our finances to be in good condition; to Kirby Stringer for editing and producing the Newsletter, which has accompanied each issue of **THE MIGRANT**, and to Kenneth Dubke for publishing **THE MIGRANT** during the editor's absence; to Ben Coffey, Mrs. Arlo Smith and Wendell Whittemore for planning and leading the several field trips in this unique territory; to Mr. Edward J. Meeman, Editor-emeritus of the Memphis Press-Scimiter, for the inspiring and instructive talk he made at the Annual Dinner, and to Dr. Arlo I. Smith for his excellent pictures and talk on Reelfoot

Lake given on Friday night; to the interested officials of the State of Tennessee who have caused to be erected here, the Ellington Assembly Hall and its attached museum, in which we have held our meetings, and for the acquisition of additional lands along the south shore of the lake and beautification of same for use of the public; to the local committee on arrangements, for sending out the letter of information to our chapters and for so efficiently arranging for this fine Reelfoot Lake meeting, including the Annual Dinner, this committee being composed of Mrs. Ben Coffey, Miss Mary Devant, Earl Fuller, Ed King, Mrs. J. H. McWhorter, Mrs. Henry A. Schiller, Mrs. Arlo I. Smith, Miss Alice Smith and Mrs. Rose Wooldridge, Chairman, all of Memphis—and also Mrs. John S. Lamb of Dyersburg, Mrs. Jean Markham and Mrs. Betty Sue Summara, both of Tiptonville.

Marguerite McKinney
Secretary

# THE SEASON

MEMPHIS AREA—A Cattle Egret was seen at Lakeview, Miss., 19 April, Alice Smith. White-rumped Sandpipers, 22 on 12 May at the Tupelo, Miss. hatchery (Mrs. Lula Coffey, Mrs. Helen Dinkelspiel, Mrs. Ed Carpenter) and 40 at Anderson's, Lonoke Ark., 17 May (BC, LC, AS) where the Halbergs (Ark. Aud. Soc.) were finding them. Red-backed Sandpiper, spring plumage, 3 at Tupelo and 3 at Lonoke, same trips. Dwight Partee reported Cliff Swallows at Norfolk Dam Powerhouse, Ark.—5 on 31 Mar. and 50 on 7 Apr. T. O. S. hike at Wall Doxey (Spring Lake) State Park, Miss., 22 Mar., yielded: 4 Tree Swallows, 6 Red-breasted Nuthatches, 3 White-eyed Vireos, 3 Black-and-White Warblers, 9 Pine Warblers, and 4 Yellow-throated Warblers. 30 Pine Siskins were in our yard, 30 April.

BEN B. COFFEY, JR., 672 N. Belvedere, Memphis 7, Tennessee.

NASHVILLE—Following a bitter cold winter, spring seemed normal weather-wise, except that leaves on our trees seemed about 5 to 7 days behind in their development. They were only about half out on 25 April, giving us our best chance to see birds on a Spring Count in many years. Contrary to expectations, most of our transients and summer arrivals were several days ahead of their normal schedule. The period of this report is from March 1st through 31 May.

Common Loon were scarce with only two reports, one on Bush lake 7 April (HEP), and two on Old Hickory lake 22 April (LOT). Grebes left early with the last reported being two Horned on Old Hickory 10 April (LOT) and three Pied-billed on Bush 9 April (HEP). No Little Blue Heron or Common Egret were reported. Black-crowned Night Heron are now scarce and may have moved from their heronry. Three Yellow-crowned Night Heron on 29 April at Buena Vista (JP) were later than usual, but could have been easily overlooked. No Bittern were reported. Wintering Gadwall remained until 15 April with six on Bush lake (HEP). The last Pintail were two on Old Hickory 21 March (LOT). American Widgeon stayed late with two on Bush 24 April (HEP). Wintering Redhead at Bush stayed later than normal with one there on 3 April and four were found on Radnor lake on 5 April (HCM and HEP). Lesser Scaup left much earlier than usual, the last being 30 on Bush lake on 14 April (HEP). Also leaving early was Common Goldeneye, the last being one on Bush 11 March (HEP). After wintering, two Bufflehead were still on Bush 9 April (HEP). Seven Ruddy Duck on Bush 15 April were later than normal (HEP). No rails were reported other than American Coot. A dozen were still at Bush 31 May. Shore birds were very scarce as was suitable habitat for them. Killdeer seem far below their normal numbers. A Spotted Sandpiper at Bush 4 April was earliest ever by 5 days (HEP). Twenty seven Least Sandpipers were at Colman's lake on 23 May and one 29 May, both dates later than usual (LOT). Two Semipalmated Sandpipers at Bush on 7 April were about 15 days earliest ever (HEP).

The last Red-breasted Nuthatch was one at Basin Springs on 15 March (KAG). A pair of House Wrens returned to their previous nesting area on Estes Road on 23 April (**fide** ARL). Bewick's Wrens certainly are getting more scarce here each year. We know of only one nesting pair of House Wrens so apparently it can't be that the House Wrens are running the Bewick's out of our area. An early Catbird was at the home of KAG on 11 April. Also early was a Wood Thrush at ARL's home on 7 April. These seem to be getting more scarce in our residential areas. Swainson's and Gray-cheeked Thrush were both normal in their arrival time and numbers. A Veery at the home of ARL was earlier than usual. Bluebirds are still scarce in our County and very few nests were reported. Both Kinglets were scarce during the period as were Waxwings.

Most Vireos and Warblers arrived several days earlier than normal. A Worm-eating Warbler was at Basin Springs on 12 April (KAG). A Cerulean at Radnor on 10 April was very early (ARL and SB). Also early was a Chestnut-sided 21 April at ARL's home. Both Bay-breasted and Ovenbirds were late and scarce. Only one Bobolink was reported, a male at Bush on 12 April (HEP). The arrival of Baltimore Orioles was normal but an Orchard in South Harpeth Valley on 12 April was several days earlier than usual (KAG). A Scarlet Tanager on 9 April was our earliest ever. It was at the home of Mrs. McCarver (**fide** KAG). A Summer Tanager at ARL's home 13 April was several days earlier than normal. Several days early was a Rose-breasted Grosbeak on 18 April at Two Jays and an Indigo Bunting in South Harpeth Valley on 12 April, both by KAG.

A Dickcissel reported at the Hodgson home on 28 Feb. was still there on 7 and 8 March. The last of our many wintering Pine Siskins was one at J. P. Jones home on 16 April. A Lark Sparrow was found on Murray Lane on 25 April (JR), and an apparent nesting pair were found near Fernvale on 9 April (AFG et al). The wintering Harris' Sparrow remained near the Hodgson home until 27 April. Also there, was our latest ever spring record for the White-Crowned Sparrow, one being near there on both 28 May and 1 June. A late Fox Sparrow was at the SB home on 14 April.

Contributors: Sue Bell, Katherine Goodpasture, Amelia Laskey, Harry Monk, Jennie Riggs, Lawrence Trabue, H. E. Parmer.

HENRY E. PARMER, 3800 Richland Ave., Nashville 5, Tenn.

COLUMBIA—Our most successful Spring Count to date (143 Species) is attributed to several factors. As has been our good fortune during each of the last three years a cold front moved thru the area just before the count day rendering the conditions good for bird activity and making it possible to cover abundant territory on foot without the exhaustion which would have occurred on warmer humid days. Some members of two of our three parties spent almost the entire twenty-four hours in the field except for the hours of sleeping on the scene of late evening and early morning observations (Gray family at their camp near Swan Creek and Mayfields in the forest at Primm Springs as is their annual custom). Our field day generally falls on the Wednesday afternoon and Thursday morning between the last week-end of April and the first week-end of May so as not to conflict with Nashville and TOS counts. This year our 29-30 April dates were just about ideal for the peak of the migration and even a few late lingering winter residents. We also had some good luck on hawks and waterbirds.

Some Warbler arrivals: Louisiana Waterthrush, 18 Mar.; Black and White Warbler, 5 Apr.; American Redstart, Yellowthroat, Blue-winged, 11 Apr.; Parula, Yellow-throated, Hooded, 12 Apr.

Ducks on Godwin Reservoir 4 April: Gadwall (3), Green-winged Teal (1), Blue-winged Teal (60), American Widgeon (3), Wood Duck (2), Ring-necked (20), Lesser Scaup (60), Bufflehead (2), Pied-billed Grebe (5) and American Coot (50).

The Common Loon on Godwin Reservoir on 29 April is much later than any we have recorded in recent years.

GEORGE R. MAYFIELD JR., Maury County Hospital, Columbia, Tenn.

CHATTANOOGA—Late date on the Pine Siskin this year was 8 May when six were observed feeding among 15 Goldfinch atop Lookout Mountain at Point Park (RTB Jr.). Late date recorded in Chattanooga for the Pine Siskin is 16 May. Two Red Crossbills (RE & RTB Jr.) which were seen feeding at the Park were an added treat to several members of the Chattanooga Chapter when one was trapped and banded. See **Round Table Notes** for the details.

Carol and Stanley Barr, two of the local Chapter's most regular and consistent feeding station operators recorded two Fox Sparrows on 23 April at their station. Their date was considered the latest on record, previous Chattanooga record 3 April, until two others were seen on Spring Count (BB).

Birding activities at Chickamauga Park, Georgia have been in "full swing" for the last month with the local Chapter making a trip on 19 April. On that day, a pair of Woodcock were flushed from a small hill in the "South Post" area. A little later the Red-cockaded Woodpecker was spotted near Brock field. Benton Basham reported a Brewster's Warbler, 19 April, on the same trip. See **Round Table Notes** for details. Two Blue-winged Warblers were observed in separate locations about 1½ miles apart in the Park on 30 May (KHD & RTB Jr.). This record brings to mind the breeding record established for the Park by Leo Acuff. Yellow-throated Vireo records at the Park 30 May (KHD & RTB Jr.), 7 June (BB), this season have added to the volume of records compiled by Rock Comstock from 1959-1962 on this specie. Two Pine Warblers were reported at Chickamauga Park on 31 May (KHD & RTB Jr.).

A check on Chapman Pond, at Shallowford Road, 31 May yielded a single Blue-winged Teal, (KHD & RTB Jr.), previous late date was 21 May. On 1 June, Benton Basham returned to the pond where three Sandpipers were seen. These were Semipalmated Sandpipers which have been recorded at brief intervals in the past from 21 May to 25 May. Two were caught using mist nets.

A late Lincoln's Sparrow, 26 April (BB), was recorded as being 12 days later than previous late Spring date of 14 April. An Osprey was seen on 15 May and another 22 May from Point Lookout (RTB Jr.). Both birds were flying to the northeast along the Tennessee River. Scarlet Tanagers have been reported several times this season at the higher elevations on Lookout Mountain, 27 May (TR), and Walden's Ridge (Signal Mountain), 7 June (RTB Jr.).

Banding activities for the Chapter have been rather slow with the exception of Cliff Swallow banding at the Nickajack culvert on 31 May and 8 June. A total of 337 birds, 333 adults and 4 immatures, were banded by 15 members. This year there were 550 nests, more than ever before recorded for the site. Another Cliff Swallow colony has been located under a new "Interstate" highway bridge on Shallowford Road at the Chattanooga Industrial Park. It is assumed that this colony, with about 30 nests under construction at present, moved from the bridge about 1½ miles away over the Chickamauga Creek on Shallowford. For the last three summers, humans have destroyed the nests above the latter site. When a check was made to ascertain the exact numbers of birds that remained at the Chickamauga Creek site, six nests were found.

Contributors: Carol & Stanly Barr, Benton Basham, Ralph T. Bullard Jr., K. H. Dubke, Roy Evenson, T. L. Rodgers.

RALPH T. BULLARD JR., 3302 Navajo Drive, Chattanooga 11, Tenn.

KNOXVILLE—Three of the rare winter visitors of this year were last reported on about the same date: the Pigeon Hawk on 21 March, one White-winged Crossbill on 23 March (J. Campbell) and the Baltimore Oriole on 23 March (Mrs. Hash). A flock of seven Sandhill Cranes, apparently migrating, was seen on 11 March by Hollie Overton. On 27 March James Campbell found a nest of a Great Horned Owl in a white pine in Greenwood Cemetery; the two young left the nest on 9 April.

Spring migration was unusual in that there were a number of unusually early arrivals and a few unusually late departures. Some of the early dates can be attributed to a warm spell during the second week of April. The following were from 3 to 15 days earlier than their average arrival date, with the earliest date on which they were recorded this spring: Osprey, 18 March; Barn Swallow, 22 March; Wood Thrush, 3 April; Hooded Warbler, 9 April; Parula Warbler, 12 April; Redstart, 12 April; Orchard Oriole, 12 April; Ruby-throated Hummingbird (4 observers of different birds), 15 April; Rose-breasted Grosbeak, 19 April; Nighthawk, 21 April. Several of these arrivals were reported by Beth Lacy. Four species reported on the Spring Field Day, 26 April, were up to 15 days behind their average spring departure; they were: Yellow-bellied Sapsucker, Red-breasted Nuthatch, Rusty Blackbird, and Pine Siskin; the latter have been reported as late as 12 May this year (Joseph Howell). Two other late migrants were Semipalmated and Least Sandpipers seen on 18 May at the Sterchi bait farms by Maxie Swindell.

One or more Orange-crowned Warblers seen on 23 and 26 April by J. B. Owen and James Campbell was a rare spring migrant. Another was the Upland Plover seen on 26 April by James Tanner; this was the second record of this species for Knox County. It was flushed several times from plowed fields and grassy pasture in the new University farm bordering Loudon Lake.

JAMES T. TANNER, Route 10, Knoxville 20, Tenn.

GREENEVILLE—We will start our spring season report by saying so far as we know Greene County had no invasion by Crossbills or Pine Siskins, as did other communities in East Tennessee, during the winter.

March started with the melting of a snow that fell the last of February. At this date, Mourning Doves had already started nests. Common Snipe were coming to the bottoms in ever increasing numbers. On 3 Mar. E. Phoebes arrived and on 4 Mar. large flocks of male Redwinged Blackbirds started passing through. Louisiana Waterthrushes were on the smaller creeks by 23 Mar. and by 25 Mar. Greater Yellowlegs were calling over the wet bottoms. On 26 Mar. the first Yellow-crowned Night Heron had come back. Purple Martins came to the northwest part of the county 27 Mar. but had been in the south part of the county three weeks earlier. Two Green Herons 28 Mar. and 29 Mar. Purple Finch, Goldfinch, and Brown Thrashers. On 30 Mar. Vesper Sparrows were around the feed lots. By 2 Apr. the first Rough-winged Swallows and on 5 Apr. Barn Swallows. On 11 Apr. the single Yellow-crowned Night Heron was augmented by three more going and coming to the feeding grounds. On the same date White-crowned and White-throated Sparrows were still present in considerable numbers with Common Snipe and Lesser Yellowlegs still on the bottoms.

On 12 Apr. the warblers started to come through and take the show away from the shore and water birds with the arrival of a Black and White on this date, then on the 14th a Yellow and on the 15th a Yellowthroat, 16 Apr., a Catbird and on 18 Apr. Hummingbirds. On 19 Apr. we found what other communities had been having all winter, Pine Siskins in great numbers. Also, 19 Apr. on a trip to Davy Crockett Lake and Paint Creek we found Pied-billed Grebes, Lesser Scaup, Ruddy Ducks (3 in a flock of 200 Lesser Scaup), Virginia Rail, American Coot, Chimney Swifts, Olive-sided and Acadian Flycatchers, Red-breasted Nuthatches, Swainson's and Gray-cheeked Thrushes, Blue-gray Gnatcatchers, Cedar Waxwings, Yellow-throated Vireo, Worm-eating, Parula, Black-throated Green, Yellow-throated, Pine and Hooded Warblers, Ovenbird, Orchard Oriole, Scarlet and Summer Tanagers plus a Chipping Sparrow (Clark, Darnell & Nevius). Also on 19 Apr. one Ruby-crowned Kinglet. 20 Apr. Great Horned Owl and Prairie Warbler were noted. On 22 Apr. Indigo Bunting, Solitary Sandpiper and the Pine Siskins were still present in large numbers (Nevius), with Cedar Waxwings, Rose-breasted Grosbeaks and the first Evening Grosbeaks which we usually have all winter. On the same date, Yellow-breasted Chat, Blue Grosbeak, Grasshopper Sparrow, White-crowned and White-throated Sparrows were noted (Clark & Spees). Eastern Kingbird, Blue-winged Teal and Great Blue Heron on 23 April. After a quick rain on 24 Apr.—one and one half inches in 20 minutes—we found standing around among the cattle four Cattle Egrets. They were still present the next day (Nevius). 25 Apr. found Wood Pewee, Parula, Myrtle, Chestnut-sided and Kentucky Warblers present (Clark & Darnell). On spring count day, 26 Apr., we added one Snow Goose, one Common Tern, Philadelphia and Warbling Vireos. One Bachman's Sparrow was found singing on 30 April. White-throated Sparrows were still around 1 May. In the alfalfa fields, 14 May, Redwings had nests with eggs in them and Ring-necked Pheasants had about half their eggs laid. Eastern Bluebirds seem to be as abundant, or possibly a few more, than in 1963. During May we had 5.6 inches of rain, the early part of the month was cold, the latter part hot. During April six inches of rain.

RICHARD NEVIUS, Route 3, Greeneville, Tennessee.

KINGSPORT—Although our spring count half way through the quarter on which we are now reporting was unspectacular we had an interesting spring migration. Most of our unusual records were contributed by Thomas W. Finucane. On 4 April he saw Water Pipits of which we have only four previous records, Jan. '49, May '52, '53 and '57. Undoubtedly his most colorful observation was a Purple Gallinule on Chimney Top 18 April, a first for our records. Unusual, too, were 5 Red-breasted Nuthatches on our Spring Count. Mr. Finucane had also observed Red-breasted Nuthatches on 4 and 11 April. Late and unexpected were 3 Northern Waterthrushes on Bays Mountain 16 and 17 May. Two observations of water birds augment our variants. I saw one Bonaparte's Gull on Patrick Henry 12 April in a mixed flock of Herring and Ring-billed Gulls, and on 19 April one Bonaparte's appeared at the fish hatchery. On 14 May a wounded Canada Goose was seen by Arthur and Elizabeth Smith on the Holston River near Eastman. Thomas Finucane saw a Swamp Sparrow near the reservoir on Bays Mountain 25 April, another first in our record.

The late winter and early spring were notable for the absence of several species of water birds we have come to expect. We recorded no observations of either the Common or Red-throated Loon, no Western or Horned Grebe, no Double-crested Cormorant, no Black-crowned Night Heron. Between ten and fifteen years ago we listed Black-crowned Night Herons every April. In 1956 we had two observations, and no more until a single record in '62. American Widgeon were fewer this year than in recent years. During April we had regular weekly records of a goodly number of seven species of water birds not visible for our Spring Count, Great Blue Heron, Blue-winged Teal, Ring-necked Duck, Canvasback, Bufflehead, Common, and Red-breasted Mergansers. The Blue-winged Teal returned early on 28 March. Hawks continue very scarce, but after no observations during the winter we did record during this past quarter an occasional Sharp-shinned Cooper's, Red-tailed, Red-shouldered, and Sparrow Hawk. Osprey appeared early on 28 March. Our records show very few sandpipers. Killdeer continue very scarce, especially in areas sprayed for white-fringed beetles.

A few species of wintering birds lingered longer than usual, Lesser Scaup through 28 May, Evening Grosbeaks until 13 March and Fox Sparrows, 4 April. A few spring migrants other than those previously mentioned appeared early, such as Purple Martins, 7 March; Eastern Kingbirds, 8 April; and Blackpoll Warblers, 25 April.

Notable during the nesting season are the Blue Grosbeaks nesting near the Athur Smith's property for the second year, and the Baltimore Oriole a few hundred feet from the property of Fred Kays. A Baltimore Oriole has spent two winters near the feeding station of Mrs. Fred Kays. Now a hanging nest is plainly visible about twenty feet above a paved road. On 14 June four nestlings were found dead on the pavement.

MRS. ROBERT M. SWITZER, 1620 Fairidge Place, Kingsport, Tenn.

BRISTOL—For the most part observations in Bristol were limited during the spring months and as a result most of the migration passed unobserved. As spring made its way to this part of our state a few scattered records were collected for winter and migrant waterfowl. Last dates for several species were as follows: Horned Grebe 7 April (1); Pied-billed Grebe 2 May (1); Canada Goose 9 March (12) (WIQ); Blue-winged Teal

7 & 11 April (6 & 7 respectively); Ring-necked Duck 22 March (1) at King's Spring; Bufflehead 9 March (1).

A single Cooper's Hawk was seen flying over the South Holston River near the Bristol waterworks on 5 May (RS-WC). A single Red-tailed Hawk was observed on two occasions at Smalling's Curve on 16 March (WC) and 9 April (RS-WC). A Red-shouldered Hawk was found in the wooded bogs of Shady Valley on 30 April (GC-WC) and 3 May (RS-WC). No nest could be found. Ospreys were reported from South Holston River (1) 7 April (RS-WC), near Damascus, Va. 12 April (1) (GC), and a single bird fishing on South Holston Lake 27 April (WC).

A Woodcock flushed in Shady Valley on 18 April leaving behind three flightless young birds (KD-WC). Interesting records along South Holston Lake shores were: Bonaparte's Gull 5 Apr. (2) (WC) and our last record for a Ring-billed Gull 27 April. These birds were not recorded in the great numbers (50 to 100) that they usually are present with during the early spring. One Forster's Tern flew at close range on 25 May (FB-WC).

The Barn Owls which have nested in past years near Piney Flats, were again seen on 6 & 7 March (WIQ) but only one bird each time. Two flew over Viedea Drive on the night of 17 April (BQ).

H. W. Nunley again reports the presence of a Chuck-wills-widow near his home on South Holston River. The nesting area has evidently been moved from the location reported in **The Migrant** during the past few years.

Roger Stone found an unusual heron near the Bristol waterworks on 5 May and with the writer was able to determine its identification as an immature Yellow-crowned Night Heron on 6 May.

Some last date records for winter residents were: Yellow-bellied Sapsucker 11 April; Red-breasted Nuthatch 22 March; Brown Creeper 9 April; Cedar Waxwings present until June; Myrtle Warbler 3 May; Rusty Blackbird 20 March (20); Purple Finch 9 April; Pine Siskin 10 May (10) at Mendota, Va. (WC); Red Crossbill 22 March (20) on Cloudland Drive (DR-WC); Slate-colored Junco 7 April; White-crowned Sparrow 3 May; and White-throated Sparrow 6 May.

First date spring records for migrants and summer residents were: Common Nighthawk 19 April; Chimney Swift 4 April; Ruby-throated Hummingbird 27 April; Red-headed Woodpecker reached peak breeding population by 24 April (one or two individuals wintered); Eastern Kingbird 17 March; Tree Swallow 2 May; Bank Swallow 2 May; Rough-winged Swallow 13 April; Barn Swallow 7 April; Cliff Swallows 2 May; House Wren 12 April; a single Short-billed Marsh Wren was observed near Painter Creek Dock on 23 May (FB-WC).

Other first date spring records were: Catbird 19 April; Brown Thrasher 20 March (RS)—this observation exceeds previous early records for this species by two days; Wood Thrush 14 April; Blue-grey Gnatcatcher 5 April; White-eyed Vireo 5 May; Black and White Warbler 14 April; Prairie Warbler 11 May; Ovenbird 14 April; La. Waterthrush 1 April; Kentucky Warbler 13 May; Yellowthroat 27 April; Yellow-breasted Chat 27 April; Hooded Warbler 2 May; Wilson's Warbler 2 May; Canada Warbler 2 May.

A flock of Redwinged Blackbirds near South Holston Lake numbered about 400 on 20 March. On that same date some 200 Cowbirds were seen at Goose Pimple Junction near Bristol but were not present the next day. The peak migration for the Common Grackle was determined as about 7

March when thousands covered the trees and fields near the Bristol Country Club.

Our first records for the following were: Orchard Oriole 19 April; Baltimore Oriole 20 April; Scarlet Tanager 24 April; Summer Tanager 22 April; Rose-breasted Grosbeak 3 May; Blue Grosbeak 24 May (1) (DR); Indigo Bunting 24 April; Savannah Sparrow 5 April; Grasshopper Sparrow 24 April; and Vesper Sparrow 16 March.

CONTRIBUTORS: Fletcher Bingham, Wallace Coffey, George Craig, Ken Dubke, H. W. Nunley, Bob Quillen, Mrs. W. I. Quillen, Dick Raybun, Roger Stone, Enno vanGelder.

WALLACE COFFEY, 508 Spruce Street, Bristol, Tennessee.

ELIZABETHTON—Bird migration through here has been rather routine this past season. We had only one record of the Common Loon (1) on 5 April. Horned Grebe (10) were noted on area lakes till 5 April, while a Pied-billed Grebe was present to 10 May. The last Great Blue Herons (3) were observed on 22 March. The first Green Heron of the season on 9 April. One American Bittern was noted at Milligan College on 5 April (CS).

At the Roan Creek area of Watauga Lake eighty Mallards were noted on 1 Mar. then the last (1) on 3 May. Also, at the same area Black Duck (510) were present in good numbers at the same time. The Black Duck then dropped sharply to only two on 28 March. The usual number of Gadwall (20) were present on Patrick Henry till 5 April then dropped to two on 19 April. Few American Widgeon were noted this season with the last (6) found 19 April. Green-winged Teal (1) on Boone Lake 22 March. Blue-winged Teal (4) only on 26 Mar., (9) 5 April, and (1) 11 April. Wood Duck (1) was first observed on 7 Mar. and Redhead (6) only on 15 Mar. and (4) 22 March. Ring-necked Duck (50) were located on 7 Mar. and (69) 15 Mar. with a drop, then the last record on (1) 3 May. Canvasback (8) were noted on 1 Mar., (4) 15 Mar. and (1) 23 March. Greater Scaup (4) were identified on 15 Mar. and singles on 21, 23 and 29 March. On Boone Lake 1 Mar. Common Goldeneye (47) were still plentiful and also at the Roan Creek area (66), then a sharp drop to nine on 15 March. A single female Common Goldeneye has been noticed on Wilbur Lake to 26 May. Bufflehead numbers have fluctuated this season with a high count (65) on 23 Mar. and good numbers (60) on Wilbur Lake 11 Apr. then a drop with a single still present 10 May. Single records of an Oldsquaw and a Ruddy Duck on Boone Lake 5 April. On 15 Mar. five White-winged Scoters (KHD) were noted on Boone Lake. The largest number of Hooded Mergansers (8) were noted on 29 Mar. and last record of one on 3 May. Common Merganser records are as follows: (7) 1 Mar., (3) 8 Mar., and (5) 23 Mar. Red-breasted Mergansers were recorded on the following dates: (15) 23 Mar., (17) 5 Apr., (12) 11 Apr., (15) 3 May and six at the Roan Creek area on 17 May.

Black Vultures are seldom seen in our area so the following records are of interest: (15) 8 Mar., (15) 29 Mar., and (2) 12 April.

Only a single record of a Cooper's Hawk on 2 Apr. and one of a Red-tailed Hawk on 5 April. Broad-winged Hawks were first noted on 12 April. Scattered single records of Osprey from 5 Apr. to 12 April. Our first positive evidence of the Ring-necked Pheasant reproducing in Shady Valley was of a female and five or six chicks flushed on 21 May Roby McQueen **fide** KHD. Single Sora Rail noted regularly from 27 Mar. to 8 May and two on 2 Apr. (CS). American Coot records ranged from (6) 15 Mar. to a high on (15) 11 Apr. with the last noted on (1) 17 May. Semipalmated Plover (2) on 17 May. Common Snipe seemed to reach peak numbers (27) on 5 Apr. and the last noted (2) on 29 April.

Spotted Sandpipers were first noticed on 19 Apr. with single scattered records to 27 May. Solitary Sandpipers (3) on 29 Apr., (8) 3 May, (3) 6 May and (1) 9 May. Greater Yellowlegs (1) on 5 Apr., (2) 8 Apr. and (1) 9 May. Lesser Yellowlegs (1) only 5 Apr., (1) 3 May, and (3) 9 May. A single Least Sandpiper on 9 May and two Semipalmated Sandpipers on 27 May.

Gulls didn't seem to be so common this season. Herring Gulls on the following dates: (1) 15 Mar., (2) 23 Mar., and (16) 5 April. Largest number of Ring-billed Gulls (189) noted were on 15 March then a decline to only one at the Roan Creek area on 18 May. Bonaparte's Gulls (10) at Boone Lake 5 Apr. and (4) 11 April. A single Forster's Tern was observed at the Roan Creek area on 27 May (KHD).

Some first dates: Chuck-wills-widow 16 Apr.; Whip-poor-will 16 Apr.; Nighthawk 21 Apr.; Chimney Swift 7 Apr. and Hummingbird 20 April. The last observation of Yellow-bellied Sapsucker was noted on 12 April. The first Eastern Kingbird on 13 Apr.; Great Crested Flycatcher 22 Apr.; Eastern Phoebe 7 Mar.; Acadian Flycatcher 3 May; Traill's, 17 May; Least, 16 Apr.; E. Wood Pewee, 17 Apr. Tree Swallows (1) on 8 Apr., (13) 3 May, and (1) 24 May. Rough-winged Swallow, 29 Apr.; Barn Swallow, 8 Apr.; and Purple Martins at the Blair Shannon residence near Johnson City 4 March. Mrs. Shannon has been keeping first arrival dates for many years and this is her earliest. Her previous early date was 15 March.

The last Brown Creeper noted was on 15 April. The first House Wren 19 April; Winter Wren noted on Roan Mountain at 5800 feet elevation on 5 April. Bewick's Wren, 15 Apr. First Catbird on 19 Apr. and the first Brown Thrasher in Johnson City, 20 Mar. (HD). Only one Swainson's Thrush on 3 May. Veery, on 26 Apr.; Blue-gray Gnatcatcher, 2 Apr. Single Ruby-crowned Kinglets only on 29 Mar., 12 Apr. and 3 May. Cedar Waxwings (17) reappeared on 24 Mar. and common remainder of the season. White-eyed Vireo on 11 Apr.; Yellow-throated Vireo only found (3) on 3 May. Solitary Vireo, 12 Apr.; Red-eyed Vireo, 25 Apr. and Warbling Vireo 3 May.

First dates and migration dates include the following: Black and White, 11 Apr.; Swainson's, 26 Apr.; Worm-eating, 18 Apr.; Golden-winged, 3 May; Parula, 18 Apr.; Yellow, 14 Apr.; Magnolia only on 3 May; Black-throated Green, 12 Apr.; Cerulean (3) only on 3 May; Blackburnian, 18 Apr.; Yellow-throated (1) only on 3 May; Chestnut-sided, 16 Apr.; Blackpoll (1) only on 3 May; Pine (1) only found 29 Mar.; Prairie, 19 Apr.; Palm from (1) 19 Apr. to (2) 3 May; Ovenbird, 16 Apr.; Northern Waterthrush (1) only on 3 May. Louisiana Waterthrush, 5 Apr.; Kentucky, 24 Apr.; Yellowthroat, 16 Apr.; Yellow-breasted Chat, 18 Apr.; Hooded, 19 Apr.; Wilson's only (2) on 3 May and (1) 17 May; Canada, 3 May and American Redstart, 19 April. Bobolink (6) only on 25 Apr., (3) 8 May and (1) 13 May. Redwinged Blackbirds, 1 Mar.; Orchard Oriole, 18 Apr.; Baltimore Oriole, 20 Apr.; Rusty Blackbirds (4) 8 Mar., (6) 23 Mar., (2) 5 Apr., (6) 18 Apr. and (1) 3 May. A Brewer's Blackbird was carefully identified in Siam on 5 April (ED). Scarlet Tanager, 25 Apr.; a single Blue Grosbeak was found on 3 May.

Evening Grosbeaks were noted regularly in flocks up to 36 birds with their last date on 3 May when 59 were found. Indigo Buntings first noted on 19 April. Very few Purple Finch during the entire period with only these records: (3) 8 Mar., (1) 15 Mar., (60) 28 Mar. and (1) 26 April. Pine Siskins were observed regularly with the last ones (2) on 13 May. On 12 Apr. 300 were recorded and 800 on 26 April. Several White-winged Crossbills were noted at Mountain Home 8 Mar. and about 15 to 20 on 11 Mar. For our last dates a male and two females on 7 April (RLJ). The last Red Crossbills of the season were five on 3 May.

The largest number of Savannah Sparrows (50) were noted on 8 Mar. with scattered numbers to 3 May when two were found. Sparrow first and last dates: Grasshopper, 19 Apr.; Vesper, 8 Mar.; Chipping, 15 Mar.; White-crowned, 3 May; White-throated, 11 May; Fox (2), 5 Apr. and Swamp, 3 May.

Contributors: John Barnitz, Fred W. Behrend, Mr. and Mrs. J. C. Browning, Ed Davidson, Helen Daywitt, Kenneth Dubke, Dr. and Mrs. Lee R. Herndon, R. L. James, Mrs. Betty King, Roby D. May, Roby McQueen and Charles Smith.

KENNETH H. DUBKE, 918 State Line Road, Elizabethton, Tennessee.

## THE 1964 SPRING FIELD DAYS

### By T.O.S. MEMBERS

Counts were again submitted from a total of ten areas, the same as last year. This is the second highest Spring Count ever achieved across the state with a total of 202 species being reported. No doubt, one of the single most all important factors contributing to this is the larger number of well trained observers actively participating.

In studying the counts it is of interest to note the remnants of the northern species that invaded the state this past winter. Pine Siskins showed up in a total of six areas and Red-breasted Nuthatches in seven of the ten areas reporting. In addition, Red Crossbills were found in Elizabethton and Evening Grosbeaks in Greeneville. Apparently the White-winged Crossbills moved out earlier as reported in this issue.

### INFORMATION ON THE COUNTS

Information on the counts and in the table are given progressively from west to east. All other pertinent information will be found under area titles.

REELFOOT LAKE—The TOS state meeting held on 1, 2 and 3 May with coverage of Lake and the westside of Obion Counties. Some species were so common that no attempt was made to count them, but were assigned to these categories: FC, fairly common; C, common. The Snow Goose appeared at the Washout 14 October 1963 and remained through the season. It was reported shot about two weeks after the meeting. Ben B. Coffey, Jr. (compiler).

COLUMBIA—The Spring Count was held from noon 29 April to noon 30 April in the Columbia area including Arrow Lake, the Gray's Camp and forest, Primm Springs, the Reservoir South of Franklin, the Godwin Reservoir and intermediate points along the way extending up to 25 miles to the north and west and 15 miles to the south, with virtually no coverage to the east. Weather was clear and cool (36 degrees at night to 70 degrees maximum) with winds up to 15 MPH westerly, on 29 April only, following passage of a cold front. Nine observers, three parties, (George and Cleo Mayfield, Dan, Gaither, Dan III, and Daws Gray, William and Mary Lucy Fuqua, and Delton Porter). A total of 60 hours were spent in the field. George Mayfield, compiler.

# TABULAR RECORD OF SPRING FIELD DAYS

| | Reelfoot Lake | Columbia | Cooksville | Nashville | Chattanooga | Knoxville | Greeneville | Kingsport | Elizabethton | Bristol |
|---|---|---|---|---|---|---|---|---|---|---|
| Common Loon | ...... | 1 | ...... | ...... | 9 | ...... | ...... | ...... | ...... | ...... |
| Pied-billed Grebe | ...... | 1 | ...... | 3 | 1 | 1 | ...... | 1 | 1 | 3 |
| Great Blue Heron | 7 | 1 | ...... | 1 | ...... | 2 | 8 | ...... | ...... | ...... |
| Common Egret | 50 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Green Heron | 9 | 6 | 1 | 13 | 9 | 7 | 6 | 3 | 2 | 3 |
| Little Blue Heron | 18 | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Snowy Egret | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Bl.-cr. Night Heron | 1 | 1 | ...... | 2 | ...... | ...... | ...... | ...... | ...... | ...... |
| Yel.-cr. Night Heron | 1 | 2 | ...... | ...... | ...... | ...... | 2 | ...... | ...... | ...... |
| Least Bittern | 1 | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... | ...... |
| American Bittern | 2 | ...... | ...... | ...... | 1 | 1 | ...... | ...... | ...... | ...... |
| Canada Goose | ...... | ...... | ...... | ...... | ...... | ...... | 8 | ...... | ...... | ...... |
| Snow Goose | 1 | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... |
| Mallard | 5 | 1 | ...... | 3 | 6 | ...... | 10 | ...... | 6 | 1 |
| Black Duck | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... |
| Gadwall | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Blue-winged Teal | 34 | 28 | ...... | 5 | 14 | 5 | 25 | ...... | ...... | ...... |
| Wood Duck | FC | 4 | 2 | 11 | 5 | 11 | 2 | 13 | ...... | 3 |
| Redhead | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Ring-necked Duck | ...... | ...... | ...... | ...... | 6 | 2 | ...... | ...... | ...... | 1 |
| Lesser Scaup | ...... | ...... | ...... | 11 | 5 | 1 | ...... | 1 | ...... | 1 |
| Common Goldeneye | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| Bufflehead | 3 | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 3 |
| Ruddy Duck | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Hooded Merganser | ........ | ........ | ........ | ........ | ........ | 2 | ........ | ........ | ........ | 1 |
| Red-br. Merganser | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 15 |
| Turkey Vulture | 10 | 5 | 2 | 27 | ...... | 8 | 10 | 4 | 3 | 4 |
| Black Vulture | 16 | 5 | ...... | 7 | 1 | 8 | 5 | 3 | ...... | ...... |
| Mississippi Kite | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Sharp-shinned Hawk | ...... | ...... | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... |
| Cooper's Hawk | ...... | 2 | ...... | 3 | ...... | ...... | 1 | ...... | ...... | ...... |
| Red-tailed Hawk | 1 | 1 | ...... | 14 | 3 | ...... | 1 | ...... | ...... | ...... |
| Red-shouldered Hawk | 6 | 1 | ...... | 1 | ...... | 1 | ...... | ...... | .... | 1 |
| Broad-winged Hawk | ........ | 2 | ........ | 5 | ........ | ........ | ........ | ........ | ........ | 1 |
| Bald Eagle | 1 Ad | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Marsh Hawk | 1 | ...... | ...... | 1 | 1 | ...... | ...... | ...... | ...... | ...... |
| Osprey | 2 | ...... | ...... | 2 | 2 | 2 | 1 | ...... | ...... | ...... |
| Sparrow Hawk | 2 | 3 | 2 | 7 | 2 | 3 | 4 | ...... | 2 | 1 |
| Ruffed Grouse | ...... | ...... | ...... | ...... | ...... | 2 | ...... | 1 | ...... | 2 |
| Bobwhite | 17 | 18 | 24 | 38 | 36 | 100 | 14 | 9 | 26 | 27 |
| Ring-necked Pheasant | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 2 |
| King Rail | ...... | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... | ...... |
| Sora Rail | ...... | 2 | ...... | ...... | 5 | ...... | ...... | ...... | ...... | 1 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Common Gallinule | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| American Coot | 150 | 4 | ...... | 1 | 8 | 2 | 2 | 1 | ...... | ...... |
| Semipalmated Plover | 14 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Killdeer | 18 | 2 | 1 | 17 | 15 | 31 | 13 | 3 | 6 | 8 |
| Am. Golden Plover | 110 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| American Woodcock | ...... | 6 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| Common Snipe | 3 | 2 | ...... | 3 | 34 | 23 | 12 | ...... | ...... | 5 |
| Upland Plover | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... |
| Spotted Sandpiper | 15 | 1 | ...... | 4 | 6 | 10 | 2 | 2 | 3 | 10 |
| Solitary Sandpiper | 8 | 4 | ...... | 13 | 16 | 7 | 6 | 2 | ...... | 8 |
| Greater Yellowlegs | 14 | 18 | ........ | ........ | 1 | ........ | 2 | 1 | ........ | ........ |
| Lesser Yellowlegs | 14 | ...... | ...... | 2 | 11 | ...... | 5 | 5 | ...... | 1 |
| Pectoral Sandpiper | 50 | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... | ...... |
| Least Sandpiper | 30 | 2 | ...... | ...... | 4 | ...... | ...... | ...... | ...... | ...... |
| Ring-billed Gull | ...... | ...... | ...... | ...... | ...... | 15 | ...... | ...... | ...... | 2 |
| Forster's Tern | ...... | 3 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Common Tern | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... |
| Mourning Dove | FC | 48 | 102 | 96 | 83 | 322 | 77 | 24 | 75 | 33 |
| Yellow-billed Cuckoo | 17 | 2 | 2 | 17 | 2 | 6 | ...... | 9 | 1 | 2 |
| Black-billed Cuckoo | ...... | 3 | ...... | ...... | ...... | 8 | 1 | 2 | 1 | 8 |
| Barn Owl | ...... | 1 | ...... | 2 | ...... | ...... | ...... | ...... | ...... | ...... |
| Screech Owl | ...... | ...... | ...... | 2 | ...... | 4 | 3 | ...... | ...... | ...... |
| Great Horned Owl | 1 | 2 | ...... | ...... | ...... | 10 | 1 | ...... | ...... | ...... |
| Barred Owl | 7 | 4 | ........ | 8 | ........ | 2 | ........ | ........ | ........ | ........ |
| Chuck-will's-Widow | 1 | 5 | 4 | ...... | 12 | 18 | 3 | ...... | 1 | 2 |
| Whip-poor-will | ...... | 20 | 1 | 9 | 25 | 9 | 1 | ...... | ...... | 8 |
| Common Nighthawk | 5 | 1 | 7 | 4 | ...... | 4 | 7 | 13 | ...... | ...... |
| Chimney Swift | 45 | 108 | 128 | 241 | 161 | 472 | 1136 | 13 | 92 | 237 |
| Ruby-th. Hummingbird | 20 | 3 | 6 | 14 | 3 | 10 | 3 | 1 | 3 | 1 |
| Belted Kingfisher | 5 | 3 | 1 | 9 | 3 | 6 | 4 | 2 | 2 | 11 |
| Yel.-shafted Flicker | 18 | 5 | 18 | 22 | 36 | 117 | 33 | 25 | 53 | 50 |
| Pileated Woodpecker | 11 | 8 | 9 | 22 | 2 | 28 | 15 | 9 | ...... | 9 |
| Red-bel. Woodpecker | FC | 20 | 12 | 75 | 12 | 40 | 5 | 3 | 2 | 7 |
| Red-hd. Woodpecker | 35 | 3 | 2 | 7 | 2 | 21 | 5 | 3 | 8 | 1 |
| Yellow-bel. Sapsucker | 2 | 2 | 1 | 2 | 2 | 2 | 3 | ...... | ...... | ...... |
| Hairy Woodpecker | 11 | 1 | 5 | 9 | ...... | 1 | ...... | 1 | 1 | ...... |
| Downy Woodpecker | 27 | 12 | 17 | 41 | 14 | 39 | 18 | 7 | 16 | 14 |
| Eastern Kingbird | 40 | 22 | 6 | 25 | 4 | 32 | 7 | 16 | 13 | 6 |
| Grt.-Cr. Flycatcher | FC | 10 | 13 | 46 | 8 | 62 | 11 | 14 | 5 | 18 |
| Eastern Phoebe | 5 | 13 | 2 | 15 | 11 | 20 | 18 | 3 | 16 | 26 |
| Yellow-bel. Flycatcher | ...... | 1 | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| Acadian Flycatcher | 27 | 16 | ...... | 24 | 1 | ...... | ...... | 8 | ...... | 5 |
| Least Flycatcher | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 22 |
| Eastern Wood Pewee | FC | 21 | 3 | 25 | 3 | 6 | 13 | 15 | 1 | 13 |
| Horned Lark | 21 | 6 | ...... | 1 | 2 | 9 | 16 | 1 | 14 | 5 |
| Tree Swallow | C | 1 | ...... | ...... | 200 | 8 | 101 | ...... | 20 | 13 |
| Bank Swallow | C | 4 | ...... | 2 | 5 | 2 | 2 | ...... | 50 | 25 |
| Rough-wing. Swallow | FC | 16 | ...... | 2 | 9 | 70 | 65 | 10 | 30 | 58 |
| Barn Swallow | FC | 45 | 6 | 70 | 35 | 172 | 182 | 34 | 28 | 116 |
| Cliff Swallow | 5 | ...... | ...... | 156 | 165 | 10 | ...... | ...... | 75 | 32 |
| Purple Martin | 22 | 16 | 6 | 48 | 324 | 285 | 7 | 32 | 20 | 1 |
| Blue Jay | FC | 33 | 95 | 196 | 109 | 478 | 105 | 81 | 110 | 87 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| mmon Raven | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| mmon Crow | FC | 34 | 51 | 77 | 72 | 263 | 74 | 50 | 53 | 68 |
| sh Crow | 40 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| rolina Chickadee | FC | 38 | 18 | 80 | 18 | 115 | 49 | 22 | 35 | 38 |
| fted Titmouse | FC | 10 | 44 | 86 | 40 | 143 | 33 | 36 | 42 | 50 |
| hite-br. Nuthatch | 14 | 3 | 8 | 6 | 6 | 4 | ...... | 1 | 6 | 3 |
| d-br. Nuthatch | 2 | 1 | ...... | ...... | 1 | 8 | 3 | 4 | ...... | 5 |
| own Creeper | ...... | ...... | 2 | ...... | ...... | 1 | ...... | ...... | ...... | ...... |
| use Wren | 1 | ...... | ...... | ...... | ...... | 1 | 2 | 4 | 8 | 12 |
| inter Wren | ...... | ...... | 2 | ...... | ...... | ...... | ...... | ...... | ...... | 11 |
| wick's Wren | 1 | ...... | 4 | 6 | 8 | 4 | 1 | 1 | ...... | ...... |
| rolina Wren | 32 | 9 | 17 | 29 | 23 | 145 | 35 | 24 | 13 | 39 |
| ockingbird | 20 | 26 | 28 | 139 | 73 | 315 | 139 | 37 | 49 | 50 |
| tbird | 35 | 31 | 47 | 55 | 14 | 58 | 36 | 11 | 33 | 79 |
| own Thrasher | 16 | 14 | 33 | 40 | 46 | 157 | 71 | 25 | 33 | 50 |
| bin | 9 | 30 | 42 | 140 | 114 | 390 | 144 | 82 | 91 | 184 |
| ood Thrush | FC | 11 | 12 | 61 | 44 | 127 | 9 | 40 | 24 | 54 |
| ermit Thrush | ...... | 1 | ...... | 1 | ...... | 5 | ...... | ...... | ...... | ...... |
| wainson's Thrush | 20 | 13 | ...... | 24 | 1 | 15 | 1 | 12 | 1 | 1 |
| ray-cheeked Thrush | 7 | 6 | ...... | 1 | ...... | 1 | ...... | ...... | ...... | 2 |
| eery | 6 | 5 | ...... | 1 | 2 | 18 | ...... | ...... | ...... | 11 |
| Bluebird | 14 | 11 | 23 | 41 | 65 | 38 | 18 | 6 | 19 | 20 |
| lue-gray Gnatcatcher | FC | 44 | 10 | 84 | ...... | 40 | 16 | 12 | ...... | 14 |
| olden-cr. Kinglet | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | 4 |
| uby-cr. Kinglet | 1 | ...... | ...... | ...... | 2 | 5 | 2 | ...... | ...... | 1 |
| ater Pipit | ...... | ...... | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... |
| edar Waxwing | 70 | 10 | 4 | 24 | 110 | 122 | 115 | ...... | 38 | 36 |
| oggerhead Shrike | 26 | 10 | 3 | 22 | 3 | 6 | 3 | ...... | ...... | 2 |
| tarling | FC | 500 | 98 | 652 | 324 | 855 | 353 | 98 | 229 | 820 |
| hite-eyed Vireo | FC | 20 | 6 | 61 | 13 | 57 | 7 | 7 | 1 | 17 |
| el.-throated Vireo | 15 | 5 | 1 | 11 | 2 | 16 | 3 | 3 | ...... | 3 |
| olitary Vireo | 8 | 1 | ...... | 1 | ...... | ...... | 1 | ...... | ...... | 9 |
| ed-eyed Vireo | FC | 26 | 11 | 60 | 43 | 185 | 15 | 26 | 22 | 53 |
| hiladelphia Vireo | ...... | ...... | ...... | ...... | 1 | ...... | 1 | ...... | ...... | ...... |
| arbling Vireo | FC | 3 | ...... | 1 | 4 | 3 | 1 | ...... | ...... | 9 |
| lack & Wh. Warbler | 2 | 12 | 4 | 28 | 16 | 63 | 10 | 11 | 1 | 19 |
| rothonotary Warbler | FC | 4 | ...... | 61 | 3 | 2 | 1 | 1 | ...... | ...... |
| wainson's Warbler | 12 | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | 3 |
| orm-eating Warbler | 1 | 5 | ...... | 6 | 1 | 3 | 11 | 18 | ...... | 8 |
| olden-wing. Warbler | 8 | 1 | ...... | 3 | ...... | 2 | ...... | ...... | ...... | 3 |
| lue-winged Warbler | 1 | 21 | ...... | 18 | 1 | 3 | ...... | ...... | ...... | ...... |
| ennessee Warbler | C | 17 | 10 | 57 | ...... | 14 | ...... | 6 | ...... | 2 |
| range-cr. Warbler | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... |
| ashville Warbler | 4 | 4 | 2 | 11 | ...... | 4 | ...... | ...... | ...... | ...... |
| arula Warbler | 22 | 7 | ...... | 13 | ...... | 3 | ...... | 5 | ...... | 11 |
| ellow Warbler | 3 | 14 | 3 | 19 | 16 | 38 | 16 | 15 | 4 | 60 |
| agnolia Warbler | 10 | 2 | 5 | 2 | 3 | 6 | 51 | ...... | ...... | 5 |
| ape May Warbler | 4 | 2 | ...... | ...... | 8 | 1 | ...... | ...... | ...... | 3 |
| l.-th. Blue Warbler | ...... | ...... | ...... | ...... | 1 | 7 | 2 | ...... | ...... | 35 |
| yrtle Warbler | 27 | 28 | 6 | 92 | 91 | 119 | 37 | 3 | 7 | 34 |
| l.th. Green Warbler | 17 | 8 | ...... | 28 | 5 | 70 | ...... | 2 | ...... | 18 |
| erulean Warbler | FC | 47 | ...... | 37 | ...... | 6 | ...... | 9 | ...... | 3 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Common Gallinule | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| American Coot | 150 | 4 | ...... | 1 | 8 | 2 | 2 | 1 | ...... | ...... |
| Semipalmated Plover | 14 | . . . | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Killdeer | 18 | 2 | 1 | 17 | 15 | 31 | 13 | 3 | 6 | 8 |
| Am. Golden Plover | 110 | . . | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| American Woodcock | ...... | 6 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| Common Snipe | 3 | 2 | ...... | 3 | 34 | 23 | 12 | ...... | ...... | 5 |
| Upland Plover | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... |
| Spotted Sandpiper | 15 | 1 | ...... | 4 | 6 | 10 | 2 | 2 | 3 | 10 |
| Solitary Sandpiper | 8 | 4 | ...... | 13 | 16 | 7 | 6 | 2 | ...... | 8 |
| Greater Yellowlegs | 14 | 18 | ...... | ...... | 1 | ....... | 2 | 1 | ....... | ...... |
| Lesser Yellowlegs | 14 | ...... | ...... | 2 | 11 | ...... | 5 | 5 | ...... | 1 |
| Pectoral Sandpiper | 50 | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... | ...... |
| Least Sandpiper | 30 | 2 | ...... | ...... | 4 | ...... | ...... | ...... | ...... | ...... |
| Ring-billed Gull | ...... | ...... | ...... | ...... | ...... | 15 | ...... | ...... | ...... | 2 |
| Forster's Tern | ...... | 3 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Common Tern | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... |
| Mourning Dove | FC | 48 | 102 | 96 | 83 | 322 | 77 | 24 | 75 | 33 |
| Yellow-billed Cuckoo | 17 | 2 | 2 | 17 | 2 | 6 | ...... | 9 | 1 | 2 |
| Black-billed Cuckoo | ...... | 3 | ...... | ...... | ...... | 8 | 1 | 2 | 1 | 8 |
| Barn Owl | ...... | 1 | ...... | 2 | ...... | ...... | ...... | ...... | ...... | ...... |
| Screech Owl | ...... | .. | ...... | 2 | ...... | 4 | 3 | ...... | ...... | ...... |
| Great Horned Owl | 1 | 2 | ...... | ... | ...... | 10 | 1 | ...... | ...... | ...... |
| Barred Owl | 7 | 4 | ....... | 8 | ....... | 2 | ...... | ....... | ....... | ....... |
| Chuck-will's-Widow | 1 | 5 | 4 | ...... | 12 | 18 | 3 | ...... | 1 | 2 |
| Whip-poor-will | ..... | 20 | 1 | 9 | 25 | 9 | 1 | ...... | ...... | 8 |
| Common Nighthawk | 5 | 1 | 7 | 4 | ...... | 4 | 7 | 13 | ...... | ...... |
| Chimney Swift | 45 | 108 | 128 | 241 | 161 | 472 | 1136 | 13 | 92 | 237 |
| Ruby-th. Hummingbird | 20 | 3 | 6 | 14 | 3 | 10 | 3 | 1 | 3 | 1 |
| Belted Kingfisher | 5 | 3 | 1 | 9 | 3 | 6 | 4 | 2 | 2 | 11 |
| Yel.-shafted Flicker | 18 | 5 | 18 | 22 | 36 | 117 | 33 | 25 | 53 | 50 |
| Pileated Woodpecker | 11 | 8 | 9 | 22 | 2 | 28 | 15 | 9 | ...... | 9 |
| Red-bel. Woodpecker | FC | 20 | 12 | 75 | 12 | 40 | 5 | 3 | 2 | 7 |
| Red-hd. Woodpecker | 35 | 3 | 2 | 7 | 2 | 21 | 5 | 3 | 8 | 1 |
| Yellow-bel. Sapsucker | 2 | 2 | 1 | 2 | 2 | 2 | 3 | ...... | ...... | ...... |
| Hairy Woodpecker | 11 | 1 | 5 | 9 | ...... | 1 | ...... | 1 | 1 | ...... |
| Downy Woodpecker | 27 | 12 | 17 | 41 | 14 | 39 | 18 | 7 | 16 | 14 |
| Eastern Kingbird | 40 | 22 | 6 | 25 | 4 | 32 | 7 | 16 | 13 | 6 |
| Grt.-Cr. Flycatcher | FC | 10 | 13 | 46 | 8 | 62 | 11 | 14 | 5 | 18 |
| Eastern Phoebe | 5 | 13 | 2 | 15 | 11 | 20 | 18 | 3 | 16 | 26 |
| Yellow-bel. Flycatcher | .. | 1 | ...... | 1 | ...... | ...... | ...... | ...... | ...... | .... |
| Acadian Flycatcher | 27 | 16 | ...... | 24 | 1 | ...... | ...... | 8 | ...... | 5 |
| Least Flycatcher | .. | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 22 |
| Eastern Wood Pewee | FC | 21 | 3 | 25 | 3 | 6 | 13 | 15 | 1 | 13 |
| Horned Lark | 21 | 6 | ...... | 1 | 2 | 9 | 16 | 1 | 14 | 5 |
| Tree Swallow | C | 1 | ...... | ...... | 200 | 8 | 101 | ...... | 20 | 13 |
| Bank Swallow | C | 4 | ...... | 2 | 5 | 2 | 2 | ...... | 50 | 25 |
| Rough-wing. Swallow | FC | 16 | ...... | 2 | 9 | 70 | 65 | 10 | 30 | 58 |
| Barn Swallow | FC | 45 | 6 | 70 | 35 | 172 | 182 | 34 | 28 | 116 |
| Cliff Swallow | 5 | | . | 156 | 165 | 10 | ...... | ...... | 75 | 32 |
| Purple Martin | 22 | 16 | 6 | 48 | 324 | 285 | 7 | 32 | 20 | 1 |
| Blue Jay | FC | 33 | 95 | 196 | 109 | 478 | 105 | 81 | 110 | 87 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Common Raven | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| Common Crow | FC | 34 | 51 | 77 | 72 | 263 | 74 | 50 | 53 | 68 |
| Fish Crow | 40 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Carolina Chickadee | FC | 38 | 18 | 80 | 18 | 115 | 49 | 22 | 35 | 38 |
| Tufted Titmouse | FC | 10 | 44 | 86 | 40 | 143 | 33 | 36 | 42 | 50 |
| White-br. Nuthatch | 14 | 3 | 8 | 6 | 6 | 4 | ...... | 1 | 6 | 3 |
| Red-br. Nuthatch | 2 | 1 | ...... | ...... | 1 | 8 | 3 | 4 | ...... | 5 |
| Brown Creeper | ...... | .... | 2 | ...... | ...... | 1 | ...... | ...... | ...... | ...... |
| House Wren | 1 | .. .. | ....... | ....... | ....... | 1 | 2 | 4 | 8 | 12 |
| Winter Wren | ...... | .... | 2 | ...... | ...... | ...... | ...... | . . | ...... | 11 |
| Bewick's Wren | 1 | ...... | 4 | 6 | 8 | 4 | 1 | 1 | ...... | ...... |
| Carolina Wren | 32 | 9 | 17 | 29 | 23 | 145 | 35 | 24 | 13 | 39 |
| Mockingbird | 20 | 26 | 28 | 139 | 73 | 315 | 139 | 37 | 49 | 50 |
| Catbird | 35 | 31 | 47 | 55 | 14 | 58 | 36 | 11 | 33 | 79 |
| Brown Thrasher | 16 | 14 | 33 | 40 | 46 | 157 | 71 | 25 | 33 | 50 |
| Robin | 9 | 30 | 42 | 140 | 114 | 390 | 144 | 82 | 91 | 184 |
| Wood Thrush | FC | 11 | 12 | 61 | 44 | 127 | 9 | 40 | 24 | 54 |
| Hermit Thrush | ...... | 1 | ..... | 1 | ...... | 5 | ...... | ...... | ...... | ...... |
| Swainson's Thrush | 20 | 13 | ...... | 24 | 1 | 15 | 1 | 12 | 1 | 1 |
| Gray-cheeked Thrush | 7 | 6 | .... | 1 | ...... | 1 | ...... | ...... | ...... | 2 |
| Veery | 6 | 5 | ...... | 1 | 2 | 18 | ...... | ...... | ...... | 11 |
| E. Bluebird | 14 | 11 | 23 | 41 | 65 | 38 | 18 | 6 | 19 | 20 |
| Blue-gray Gnatcatcher | FC | 44 | 10 | 84 | ...... | 40 | 16 | 12 | .... | 14 |
| Golden-cr. Kinglet | . .. | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | 4 |
| Ruby-cr. Kinglet | 1 | ...... | ...... | .... | 2 | 5 | 2 | ...... | ...... | 1 |
| Water Pipit | .... | ...... | .... | ...... | ...... | 2 | ...... | ...... | ...... | ...... |
| Cedar Waxwing | 70 | 10 | 4 | 24 | 110 | 122 | 115 | ...... | 38 | 36 |
| Loggerhead Shrike | 26 | 10 | 3 | 22 | 3 | 6 | 3 | ...... | ...... | 2 |
| Starling | FC | 500 | 98 | 652 | 324 | 855 | 353 | 98 | 229 | 820 |
| White-eyed Vireo | FC | 20 | 6 | 61 | 13 | 57 | 7 | 7 | 1 | 17 |
| Yel.-throated Vireo | 15 | 5 | 1 | 11 | 2 | 16 | 3 | 3 | ...... | 3 |
| Solitary Vireo | 8 | 1 | | 1 | ...... | ...... | 1 | ...... | ...... | 9 |
| Red-eyed Vireo | FC | 26 | 11 | 60 | 43 | 185 | 15 | 26 | 22 | 53 |
| Philadelphia Vireo | ... . | .. | | ...... | 1 | .... | 1 | ...... | ...... | ...... |
| Warbling Vireo | FC | 3 | ..... | 1 | 4 | 3 | 1 | ...... | ...... | 9 |
| Black & Wh. Warbler | 2 | 12 | 4 | 28 | 16 | 63 | 10 | 11 | 1 | 19 |
| Prothonotary Warbler | FC | 4 | ...... | 61 | 3 | 2 | 1 | 1 | .... | ...... |
| Swainson's Warbler | 12 | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | 3 |
| Worm-eating Warbler | 1 | 5 | ...... | 6 | 1 | 3 | 11 | 18 | ...... | 8 |
| Golden-wing. Warbler | 8 | 1 | ...... | 3 | ...... | 2 | ...... | ...... | ...... | 3 |
| Blue-winged Warbler | 1 | 21 | ...... | 18 | 1 | 3 | ...... | ...... | ...... | ...... |
| Tennessee Warbler | C | 17 | 10 | 57 | ...... | 14 | ....... | 6 | ....... | 2 |
| Orange-cr. Warbler | . | . | . .. | ...... | ...... | 1 | ...... | ...... | ...... | ...... |
| Nashville Warbler | 4 | 4 | 2 | 11 | ...... | 4 | ...... | ...... | ...... | ...... |
| Parula Warbler | 22 | 7 | ... | 13 | ...... | 3 | ...... | 5 | ...... | 11 |
| Yellow Warbler | 3 | 14 | 3 | 19 | 16 | 38 | 16 | 15 | 4 | 60 |
| Magnolia Warbler | 10 | 2 | 5 | 2 | 3 | 6 | 51 | ...... | ..... | 5 |
| Cape May Warbler | 4 | 2 | ...... | . .. | 8 | 1 | ...... | ...... | ...... | 3 |
| Bl.-th. Blue Warbler | | .... | ...... | ... | 1 | 7 | 2 | ...... | ... | 35 |
| Myrtle Warbler | 27 | 28 | 6 | 92 | 91 | 119 | 37 | 3 | 7 | 34 |
| Bl.th. Green Warbler | 17 | 8 | ....... | 28 | 5 | 70 | ....... | 2 | ...... | 18 |
| Cerulean Warbler | FC | 47 | ..... | 37 | .... | 6 | ...... | 9 | ...... | 3 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Blackburnian Warbler | 2 | 2 | ........ | ........ | 1 | 30 | ........ | 4 | ........ | 5 |
| Yellow-th. Warbler | 15 | 4 | ...... | 29 | ...... | 9 | ...... | 2 | ...... | 1 |
| Chestnut-sid. Warbler | 8 | 10 | ...... | 2 | 3 | 18 | 20 | ...... | ...... | 40 |
| Bay-breasted Warbler | 4 | 12 | ...... | ...... | 7 | 1 | ...... | 2 | ...... | ...... |
| Blackpoll Warbler | FC | 1 | ...... | 6 | 15 | 10 | ...... | 10 | ...... | 1 |
| Pine Warbler | ...... | ...... | ...... | ...... | ...... | 2 | 18 | ...... | 1 | ...... |
| Prairie Warbler | ...... | 10 | ...... | 33 | 4 | 53 | 1 | 4 | ...... | 3 |
| Palm Warbler | FC | 39 | ...... | 17 | 19 | 23 | 11 | ...... | ...... | 2 |
| Ovenbird | 5 | 13 | 2 | 4 | 2 | 6 | 17 | 15 | 1 | 48 |
| Northern Waterthrush | 7 | 2 | ...... | 2 | ...... | ...... | ...... | ...... | ...... | 1 |
| La. Waterthrush | 4 | 9 | 3 | 25 | ...... | 4 | 6 | 6 | 1 | 18 |
| Kentucky Warbler | FC | 14 | ...... | 40 | 5 | 27 | 2 | 13 | ...... | 4 |
| Yellowthroat | FC | 15 | 8 | 75 | 9 | 89 | 19 | 7 | 2 | 41 |
| Yel.-breasted Chat | FC | 17 | 12 | 79 | 18 | 88 | 8 | 16 | 5 | 36 |
| Hooded Warbler | 11 | 6 | 1 | 6 | 5 | 13 | 7 | 7 | 1 | 24 |
| Wilson's Warbler | ...... | ...... | 1 | ...... | ...... | 1 | ...... | ...... | 2 | 2 |
| Canada Warbler | ...... | ...... | ...... | 1 | 1 | 3 | 1 | 4 | 1 | 15 |
| American Redstart | C | 12 | ...... | 16 | ...... | 1 | 1 | 4 | ...... | 4 |
| House Sparrow | ...... | 23 | 108 | 94 | 106 | 210 | 105 | 102 | 99 | 364 |
| Bobolink | 350 | 44 | 38 | ...... | 6 | 18 | ...... | ...... | ...... | ...... |
| Eastern Meadowlark | FC | 66 | 81 | 244 | 149 | 583 | 321 | 62 | 104 | 100 |
| Redwinged Blackbird | C | 95 | 37 | 142 | 148 | 460 | 115 | 82 | 18 | 156 |
| Orchard Oriole | FC | 19 | 6 | 93 | 28 | 35 | 13 | 10 | 8 | 14 |
| Baltimore Oriole | FC | 6 | 5 | 36 | 20 | 14 | 2 | 5 | 6 | 14 |
| Rusty Blackbird | ...... | ...... | 2 | ...... | 6 | 8 | ...... | ...... | ...... | ...... |
| Common Grackle | C | 300 | 112 | 662 | 128 | 583 | 425 | 109 | 292 | 489 |
| Br-headed Cowbird | FC | 32 | 19 | 76 | 47 | 169 | 50 | 24 | 29 | 22 |
| Scarlet Tanager | 9 | 10 | 5 | 46 | 10 | 27 | 7 | 15 | 6 | 25 |
| Summer Tanager | 22 | 12 | 19 | 67 | 23 | 41 | 9 | 22 | 11 | 4 |
| Cardinal | C | 49 | 102 | 236 | 157 | 515 | 245 | 94 | 108 | 126 |
| Rose-br. Grosbeak | 24 | 48 | 3 | 94 | 25 | 70 | 7 | 10 | 1 | 27 |
| Blue Grosbeak | ...... | 2 | 7 | 2 | 9 | 7 | ...... | 2 | ...... | 1 |
| Indigo Bunting | C | 57 | 46 | 240 | 35 | 226 | 70 | 94 | 13 | 59 |
| Dickcissel | C | 22 | 2 | 5 | ...... | ...... | ...... | ...... | ...... | ...... |
| Evening Grosbeak | ...... | ...... | ...... | ...... | ...... | ...... | 7 | ...... | ...... | ...... |
| Purple Finch | ...... | ...... | ...... | 5 | 40 | 115 | 38 | 2 | ...... | ...... |
| Pine Siskin | 20 | 8 | ...... | ...... | 4 | 198 | 265 | ...... | ...... | 87 |
| American Goldfinch | FC | 52 | 258 | 450 | 332 | 357 | 177 | 19 | 91 | 120 |
| Red Crossbill | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 5 |
| Rufus-sided Towhee | 6 | 17 | 51 | 67 | 86 | 242 | 31 | 21 | 23 | 110 |
| Savannah Sparrow | 10 | 18 | ...... | 40 | 2 | 17 | 5 | ...... | ...... | 2 |
| Grasshopper Sparrow | ...... | 8 | ...... | 13 | 11 | 10 | 4 | 5 | 1 | 12 |
| Vesper Sparrow | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 5 |
| Lark Sparrow | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| Bachman's Sparrow | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... |
| Slate-colored Junco | ...... | ...... | ...... | ...... | 1 | 5 | 4 | ...... | 6 | 41 |
| Chipping Sparrow | 15 | 23 | 17 | 59 | 30 | 89 | 15 | 9 | 20 | 38 |
| Field Sparrow | FC | 30 | 27 | 100 | 42 | 190 | 45 | 12 | 11 | 62 |
| Harris' Sparrow | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... | ...... | ...... |
| White-cr. Sparrow | 4 | 11 | 5 | 7 | ...... | 37 | 26 | ...... | 10 | 14 |
| White-thr. Sparrow | 27 | 28 | 55 | 170 | 133 | 488 | 25 | 4 | 22 | 23 |
| Fox Sparrow | ...... | ...... | ...... | ...... | 2 | ...... | 1 | ...... | ...... | ...... |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Lincoln's Sparrow | 1 | 2 | ...... | 2 | 1 | ...... | ...... | ...... | ...... | ...... |
| Swamp Sparrow | 1 | 6 | ...... | 7 | 3 | 3 | 1 | ...... | ...... | 1 |
| Song Sparrow | 2 | 1 | 11 | ...... | 18 | 142 | 29 | 20 | 23 | 157 |
| Total Individuals | | 2774 | 2005 | 6759 | 4321 | 11199 | 5397 | 1768 | 2295 | 5090 |
| Total Species | 149 | 143 | 93 | 134 | 129 | 146 | 122 | 101 | 81 | 138 |

Total Species ............... 202

COOKEVILLE—Territory covered approximately the same as that for the Christmas count and for several previous counts. Count days 24-25 April; high and low temperature 67 to 57 degrees; wind 0 to 20 MPH; cloudy most of the time. Since half of one day was rainy adjustments for this were made.

Those taking part in the count were: Dr. Claude Bruce, Mr. & Mrs. James Haile, Dr. & Mrs. E. B. Knight, Dr. & Mrs. Sid McGee, Dr. & Mrs. J. T. Moore, Mrs. Lee Medley, Prof. Miser Richmond, Mrs. C. Peterson, Miss Chrissa Wendt and Miss Marie White.

NASHVILLE—Approximately the western half of the Nashville area as worked in the past. Buena Vista marsh, Bush lake, and Old Hickory lake were not worked this year, resulting in a smaller total of species of both water and shore birds. 25 April from 5:00 A.M. to 6:30 P.M. The day ran from clear to overcast and cool. Thirty one observers were out in twelve parties. Individual hours totaled about 286 (179 by foot, 108 by car). The Barn Owls were at the same place as found on the Christmas count. The Yellow-bellied Flycatcher was by Ruth Castles. The Hermit Thrush was by Erline Elmore. 35 of the 61 Prothonotary Warblers were at Radnor. The Lark Sparrow was by Erline Elmore. The Harris' Sparrows were at the Hodgson home. The Lincoln's Sparrows were by George R. Mayfield Jr.

Those taking part in the count were: Mr. & Mrs. B. H. Abernathy, Dr. O. C. Ault, Susan Bell, Mrs. W. F. Bell, Mrs. Mark Bradford Jr., Ruth Castles, Mrs. Charles Cornelius Sr., Annella Creech, Mrs. Watkins Crocket Jr., Milbrey Dugger, Mr. & Mrs. John Ellis, Mrs. Erline Elmore, Mrs. R. E. Faituote, Albert Ganier, Katherine Goodpasture, Mr. & Mrs. Ben Groce, Virginia Hagen, Mr. & Mrs. John Herbert, Louise Jackson, Mrs. Herman Knauth, Geo. Mayfield Jr., Mrs. Chas. B. Murphy, H. E. Parmer (compiler), Jimmy Parrish, Mrs. W. A. Puryear, Jennie Riggs, Ellen Stringer, L. O. Trabue, Mary Wood.

CHATTANOOGA—The same area as covered on the Christmas Count with extension of areas outside circle along Chickamauga Lake and covering Collegedale; circle center at National Cemetery; 7 p.m. 25 April to 6 p.m. 26 April; rain continually until 3 p.m. The U. S. Weather Bureau (Lovell Field), Chattanooga, lists rainfall at .68 inches with maximum temperature of 62 degrees and low of 56 degrees during the count period. Even though described as the worst weather for a spring count since formation of the Chattanooga Chapter, conditions for observations of species between 3-5 p.m. were at the best since the birds were generally very active and forced lower in the trees. With the weather conditions as they were, it is amazing to see the names of those birds that were not counted. The Fox Sparrow which has not been seen for at least the last 7 years on any spring count was reported this year.

Those taking part in the count were: Mr. & Mrs. T. Stanley Barr, Mr.

& Mrs. E. M. West, Mr. & Mrs. Howard Meadors, Mr. & Mrs. Eugene Ranger, Mrs. Hugh W. Crownover, Miss Catherine Kellerman, Mr. Jerry Linderman, Mr. Benton Basham, Mr. (compiler) & Mrs. Ralph T. Bullard Jr.

KNOXVILLE—Sunday 26 April. The count area included all of Knox County as in recent years, with 37 members in 18 parties taking part. In spite of light rain 147 species were counted. An upland plover found by James T. Tanner appears in a count for the first time. The Orange-crowned Warbler by James Campbell and J. B. Owen. A surprising number of waterfowl helped in reaching the high count. J. B. OWEN, compiler.

GREENEVILLE—The area around Greeneville, Tusculum, Nolichuckey River, Horse Creek, Paint Creek, Bluff Mountain, and Roaring Fork Creek were covered; woodland 60%, open fields 35%, towns 5%. 26 Apr., 5:00 a.m. to 7:30 p.m. cloudy to raining; temp. 45 to 55 degrees; 16 observers in 8 parties. Total party-hours, 51 (36 on foot, 15 by car); total party-miles, 216 (12 on foot, 204 by car). Mr. and Mrs. Willis Clemens, Mrs. Turner Clinard, Mrs. Ben Clark, Mrs. Chester Darnell, Mrs. Marion Edens, Mr. and Mrs. King Gaut, Ann and Bill Gaut, Mr. and Mrs. William Hollomon, Mrs Richard Nevius, Richard Nevius (compiler), Dr. and Karl Spees.

KINGSPORT—The count was held 9 May from 5:00 a.m. to 7:00 p.m. The weather was overcast and coverage was of the usual area. Participants were the following: Thomas W. Finucane, Edgar Gift, Mrs. David Hedberg, Mrs. Fred Kays, Mrs. W. C. McHorris, Mrs. Virgil Peek, Mrs. Lucile Smith and Mrs. Ann Switzer (compiler).

BRISTOL—All points within a fifteen mile diameter circle of downtown Bristol, Tennessee-Virginia, to include South Holston Lake, South Holston River and in general, areas of Sullivan County, Tennessee and Washington County, Virginia in and around Bristol.

Participants selected between 2 May and 3 May for their count days and temperatures ranged between 60 and 70 degrees on all reports. Skies were clear and sunny for 2 May but the early hours until noon were overcast with light showers in the morning hours on 3 May with the afternoon clear, warm and sunny. There were seventeen participants in nine parties: Mr. and Mrs. A. E. Reynolds, Judge and Mrs. J. L. Cantwell, Jr., Mr. and Mrs. Rockwell Bingham, Mr. H. W. Nunley, Mr. and Mrs Herbert Miller, Miss Loyless, Miss Hiltons, Miss Clark, Miss Pflug, Mrs. Earl Francisco, George Craig, Roger Stone and Wallace Coffey (compiler).

ELIZABETHTON—The second largest number of bird species ever listed here were recorded on our Spring Count from 6:00 p.m. 2 May to 6:00 p.m. 3 May. Members of the chapter reported a total of 138 species of birds on the count which covered a wide area of Carter County and in addition Shady Valley and Cove Ridge near Butler in Johnson County as well as part of Unaka Mountain in Unicoi County. Included in the Carter County area were the hills behind Milligan College, golf course vicinity, the Doe River banks from Elizabethton to Valley Forge, Lynn Mountain, Watauga River bottom, Fitzsimmons Hill, Stoney Creek and Siam areas, Wilbur and Watauga lakes, and Roan Mountain.

Participating in the count were Dr. and Mrs. L. R. Herndon, Mr. and

Mrs. J. C. Browning, Mr. and Mrs. Fred W. Behrend, Mrs. Betty King, Roby D. May, Ed Davidson, Charles Smith, John Barnitz and Kenneth Dubke (compiler).

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# ROUND TABLE NOTES

A TENNESSEE NESTING OF THE TREE SWALLOW.—A nest of this species *(Iridoprocne bicolor)* was found by the writer, on 22 May, 1918, on Reelfoot Lake, Tennessee and this, so far as I know, is the first and only record for the State. The nest contained 4 fresh eggs, which were collected along with the male bird. The location was directly across from Walnut Log and a quarter mile from the west shore. It was constructed in an old woodpecker hole in a slim, limbless, dead cypress tree, which stood in water about 10 feet deep. This and other dead cypress trees near were of the original forest that sunk with the land when the lake was formed by the earthquake of 1811-1812. The nesting cavity was about 40 feet above the water and at a point where the trunk was only 5 inches in diameter. Tying my boat to the tree base, I found the wood still sound enough to support the spurs of my climbing irons. By the time I reached the nest, the tree had leaned ominously from its support in the muddy bottom but luckily did not go down. The nest was composed of shreds of cypress bark and was well lined with feathers of wild ducks and herons. During the several days spent there on this trip, 7 individuals were noted flying about over the water. On this and on subsequent trips, other nests were looked for but none was found. Many Tree Swallows rendezvous on Reelfoot during October and some stay into November. In the northern states, this swallow is a common breeding bird and will use nesting boxes put up for its convenience.

ALBERT F. GANIER, 2112 Woodlawn Drive, Nashville 12, Tenn.

ROUGH-WINGED SWALLOW NESTING IN THE GREAT SMOKY MOUNTAINS.—Until very recently the Rough-winged Swallow *(Stelgidopteryx ruficollis)* was not known to breed above 2500 feet in the Smokies, although summer sightings at high elevations were not unusual (Stupka, NOTES ON THE BIRDS OF THE GREAT SMOKY MOUNTAINS NATIONAL PARK, 1963).

On 22 May 1963, I observed a Rough-winged Swallow enter a cavity in a road cut several hundred yards from Indian Gap at approximately 5300 feet. The location of this nest was a considerable distance from any known stream. Hatching had not occurred by 30 May. Three young were in the nest on 24 June and had left by 11 July when one young swallow was being fed in a conifer at Indian Gap. (On 9 July, a single swallow was seen to leave the nest on my approach and move further back in the nest cavity. The other two were not in the cavity.)

THOMAS SAVAGE, Great Smoky Mountains National Park, Gatlinburg, Tennessee.

CLIFF SWALLOW COLONIES - 1963 NOTES.—On River Road out of Nashville, 29 June, nests at two bridges probably less than in 1960 (1960:45, John C. Ogden) and at a third, no birds, apparently because of evident nest destruction previous season. No stops at Sycamore Creek, Tenn. hwy. 12 bridge (ten Cliffs in air) or Dover US 79 bridge (none seen); 4 there 27 April. On our first visit in several years we were glad to see, for the first time, Cliff Swallow nests on the bridge at Paris Landing. At least 120 nests on the west approach and 60 on the east, seen from the shore only, 28 April. On Tenn. hwy. 100 (no stops): still a good colony at Beech River, none at old site Perryville bridge; Buffalo River, 1 seen 26 April and 35 Cliffs in air 28 June; new site, Cane Creek bridge, Pleasantville, 45 birds seen 28 June. White River bridge, Cotter, Ark. over 400 nests (usual), activity unknown, only 3 Cliffs remaining 28 July; moderate numbers over fields south of Calico Rock bluff and near Sylamore. Still none at Memphis or several Arkansas R. bridges checked.

BEN B. COFFEY, JR., 672 N. Belvedere, Memphis 7, Tenn.

BREWSTER'S WARBLER IN CHICKAMAUGA PARK, GEORGIA—On the morning of 19 April 1964, members of our Chattanooga Chapter were engaged in one of our monthly field trips, this one in Chickamauga National Military Park, Georgia. We were looking for new migrants as well as seeing some of our wintering species. By midmorning the group of birders had split up into smaller groups. It was one of these smaller groups that found a large concentration of birds, most of which were migrants. One rather interesting bird gave us just a glimpse before it flew. None of us saw the bird well enough to identify it, however, after carefully searching the area we relocated it. The bird was seen well by three observers—Jerry Linderman, Merlin Wittenberg and Benton Basham. The yellow crown, black eyeline, yellow wingbars and white underparts made it very obvious that it was a Brewster's Warbler (*Vermivora leucobronchialis*). Other birds in the same area were the Blue-winged Warbler, Rose-breasted Grosbeak, Cape May Warbler and many other migrants.

Other groups came to the spot where the Brewster's Warbler was seen but it could not be relocated again.

Other interesting birds seen the same day were two Woodcocks and a Red-cockaded Woodpecker near a live pine with a cavity which could have been its nest.

BENTON BASHAM, Box 426, Collegedale, Tennessee.

OREGON JUNCO IN MEMPHIS—On 22 Jan., 1964 when my 14 year old son, Ed, who does not claim to be a "birder" proclaimed, "Mama, there's a bird in our back yard which I cannot find in your bird book (Peterson's Eastern)", I decided I had to get busy and identify the Junco I had been seeing for the past week. Ed had spent the day birding with Helen Dinkelspiel and myself at Lakeview and hence found things so interesting that he had spent the last hour at the kitchen window with "book and glasses."

Our Junco appeared to be an Oregon Junco (*Junco oreganus mearnsi*) (pink-sided form). Rosy pink sides with the pink reaching up toward the back in front of the wings, gray hood sharply separated from a rusty back. I talked by telephone with Lula Coffey and examined the Junco skins at the Memphis Museum. Our bird's markings were more pronounced and richer in color than any there. Perhaps because they had faded some and the rays of sunlight and life itself gave more color to our live friend.

Our Junco was most accommodating as he stayed until 13 March. Mr. and Mrs. Ben Coffey Jr., Mrs. Helen Dinkelspiel, Mr. and Mrs. Charles Seahorn; all members of Memphis TOS came by to see and verify the identity of our friend. Only one member was disappointed, as Henry Dinkelspiel only stayed about 15 minutes. Usually a 30 minute to 1 hour wait was ample time any time during the day as our friend would feed as close as 6 feet to our windows.

MRS. EDW. L. CARPENTER, 553 Sharon Drive, Memphis, Tenn.

RED CROSSBILLS FEEDING ON DANDELIONS — National Park Service Ranger Roy Evenson while on duty at Point Park, Chattanooga, observed a "dark chocolate brown crossbill" feeding within thirty-five feet of the entrance station on 12 May. It was reported that more than fifty people had passed while the female bird sat calmly within three feet of the main walk. To gain a better and closer look at the non-descript bird, Evenson approached to watch the Crossbill pull and eat seeds from the dandelions (*Taraxacum officinale*) which grow over the lawn. The feeding process continued for fifteen minutes as Evenson watched the Crossbill move from dandelion to dandelion as each plant was cleaned of its seeds. When reported that evening, Evenson said that he could have easily thrown a mist net over the bird. On 13 May, the female did not appear. However, that afternoon, he had an opportunity to capture a male Red Crossbill (*Loxia curvirosta*) in the first pre-nuptial plumage by tossing one of the mist nets across the bird. After banding the bird it was taken to Collegedale to be photographed and released the next day after having been viewed by science students at Southern Missionary College.

RALPH T. BULLARD JR., 3302 Navajo Drive, Chattanooga 11, Tenn.

TWO BIRD KILLS AT WMC-TV, MEMPHIS — Fortunately weather conditions at times of heavy migration seem to have been more favorable to the birds at Memphis. A very few casualties were reported (1954:11-13) for October, 1953. Two spring kills at the WMC-TV tower just east of the city came to light thru the cooperation of personnel there. Mr. Eugene D. Calhoun, failing to reach me, collected the following from the ground, the morning of 7 May, 1961: Philadelphia Vireo 2, and Warblers—Tennessee 1, Magnolia 4, Black-throated Green 2, Blackburnian 2, Chestnut-sided 2, Bay-breasted 2, Blackpoll 1, Ovenbird 1, Canada 1. On the morning of 8 May, a still warm Red-eyed Vireo was found. That evening I picked up the birds and made the identification. On 11 May 1964, Mr. Jos. H. Gresham called us, then assisted Mrs. Coffey and Mrs. Ed Carpenter in finding the bodies. He also inquired of other local stations which advised that they saw no evidence of a kill. The list of those collected, verified by the writer, follows: Empidonax (sp. ?) 1, Wood Thrush 1, Swainson's Thrush 1, Yellow-throated Vireo 2, Red-eyed Vireo 55, Philadelphia Vireo 5, and Warblers,—Tennessee 1, Yellow 1, Magnolia 4, Blackburnian 7, Chestnut-sided 2, Bay-breasted 4, Blackpoll 1, Ovenbird 2, Kentucky 1, Hooded 1, Wilson's 1, Canada 4, plus Baltimore Oriole 1, Indigo Bunting 1. A stunned but still alive American Redstart was released later in a park, but two additional Red-eyed Vireos subsequently died.

BEN B. COFFEY JR., 672 N. Belvedere, Memphis 7, Tennessee.

CATTLE EGRET NESTING AT THE DYERSBURG HERONRY—Albert F. Ganier reported a heronry just northeast of Dyersburg (1960:48-49) and since then many of our members have visited this interesting colony on field trips from the Reelfoot state meetings. On 2 May, 1964, I took a few members down from this year's meeting. As we approached the heronry we counted 8 Cattle Egrets (*Bubulcus ibis*) flying in and out of the nesting area, along with Little Blue Herons, Common Egrets, and one Black-crowned Night Heron. While cattle were in the adjacent pasture only Little Blue Herons and Common Egrets were with them. We watched the flight of the Cattle Egrets and followed, by auto, about one and one-half miles in an easterly direction. Here we found a pasture where 4 Cattle Egrets were feeding with the cows. Dr. Wendell Whittemore, Dan Schreiber and others walked across the pasture and located a group of 45 of the birds. The next day my husband, Ben Coffey, and I visited the heronry again. We worked the western edge and located Cattle Egrets at 3 nests. Sticks were being carried to one nest, at another a Cattle Egret was sitting, and at the third a pair was copulating.

On 14 June, we again visited the heronry, accompanied by Alice Smith. We entered the nesting area and estimated a total of about 2500 nests (some could have been abandoned nests from previous years). About four-fifths of the nests were those of the Little Blue Heron the remainder Common Egrets with the exception of 8 Cattle Egret nests, including those located earlier. Three nests contained young approximately 5-10 days old. At other nests the birds were sitting.

The Cattle Egret nests were located well into the center of the heronry, in close proximity to nests of the other species. Two were in a dead tree some 40 feet above ground, and not more than 10-15 feet from two nests of Common Egrets and three Little Blue Heron nests. All others were in live deciduous trees about 30-40 feet up. The nests were bulky, many leaves in addition to sticks were used. They appeared deeper, resembling somewhat the nests of the Anhinga.

MRS. BEN B. COFFEY JR., 672 N. Belvedere, Memphis 7, Tennessee.

LATE SONG SPARROW AT COLUMBIA—Because of the close proximity of Middle Tennessee to areas in which the Song Sparrow nests, we have always marveled at the rather early complete disappearance of this bird from the Columbia area usually by 10 April or before, even though other non-nesting sparrows linger several weeks longer. Only the Fox Sparrow and Vesper Sparrow tend to disappear sooner (last Fox Sparrow seen 22 March; last Vesper, 4 April this year) among our regular Sparrow visitors. This year our Song Sparrows generally disappeared between 3 and 10 April.

It was therefore with considerable interest and caution that we included a Song Sparrow (*Melospiza melodia*) on our Spring Count 29 April. This bird was both seen and heard by Dan and Daws Gray who reported it to their father who discussed the identification with them at length. It was felt that the song could not be easily confused with any other Sparrow singing then in this area and both boys have heard it repeatedly on month-long annual trips to Cape Cod. The sight identification was also thought valid.

GEORGE R. MAYFIELD JR., Maury County Hospital, Columbia, Tenn.

SCISSOR-TAILED FLYCATCHER NEAR MEMPHIS—On Sunday 26 April, 1964 about 1 p.m. while riding the levee at Lakeview and Mud Lake which is just south of the Tenn. line on Hwy. 61 with my husband, Ed, and sons, Ed and Claude, I had the wonderful pleasure and thrill of seeing my first Scissor-tailed Flycatcher in Tennessee. We had had much rain for the last few days and the flycatcher was with many Bobolinks, Dickcissels and Kingbirds on the levee which was planted in lespedeza and clover, it being about a foot high. We were about ½ mile across the Miss.-Tenn. line into Tenn. Although you begin riding the levee in Miss., it soon winds back across the state line and we were just west of the Harris farm.

The Scissor-tailed Flycatcher (*Muscivora forficata*) was about 15 feet from the edge of the road when first sighted. The bird would lift and fly a short distance so that we enjoyed seeing both with and without field glasses the beautiful salmon-pink on the sides and under the wings and of course the scissored tail. I came out and called other TOS members. Helen Dinkelspiel and Alice Smith joined me and we walked and rode the levee in vain. It had begun to rain quite hard by this time and most of the birds were seeking shelter. I have observed many of these birds in the Southwest and since I have always believed that it was my favorite bird, my cup surely ran over that day.

MRS. EDW. L. CARPENTER, 553 Sharon Drive, Memphis, Tennessee.

ALBINO REDWINGED BLACKBIRDS (?) — While driving idly on country roads between Chickamauga Lake and Dayton, Tenn. on 16 Feb. 1964, several large flocks of blackbirds were seen, including Grackles, Rusty Blackbirds, Cowbirds, and Redwings. Each species was more or less segregated from the others. A search was being made for Brewer's Blackbirds, but because of unfavorable light, none could be identified.

In two fields adjoining each other, were two flocks of Redwinged Blackbirds *(Agelaius phoeniceus)*, each with an albino bird. Both birds looked white when on the ground but, as they turned in flight, were seen to be a creamy white. The back of one was deeper in color—nearer a pale tan. So far as could be seen, neither bird had a black feather. Size and shape indicated that they, too, were Redwings.

To see one albino bird at any time always comes as a surprise, but to see two within a minute's time seems extraordinary. It is probable that the two flocks of Redwings, only a field apart, frequently blend together and are actually part of one large wintering population that roost together.

This seems an appropriate time to mention another adult male found by a student in the Collegedale area on 26 February, 1961. The skin is now in the collection of Southern Missionary College and bears a tag which shows it was collected by E. O. Grundset of the faculty, who is also a member of the Chattanooga Chapter. This specimen has a white head, bill, and rump patch. The throat is pinkish, the legs light, and the body, generally, is blotched black and white. The shoulder epaulets are a paler-than-normal red and yellow. The tag also bears the usual measurements which are not described here.

MRS. E. M. WEST, 5511 Dayton Blvd., Chattanooga, Tenn. 37415.

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*The simple truth about birds is interesting enough;*
*it is not necessary to go beyond it.*

## LEO M. ACUFF

The Chattanooga Chapter recently lost its third member by death during its eleven years of existence. It is with regret that we report the death of Leo M. Acuff. Although physically handicapped for extensive walking, Leo frequently birded from his car, attended meetings with regularity, and served as chapter treasurer so efficiently as to earn special commendation.

A long time member of the chapter, it was Leo who made the first observation of the Blue-winged Warbler breeding in Chickamauga Park, the only location so far noted in the area. He was also known for his talent as a poet and reader of poetry.

MRS. E. M. WEST, 5511 Dayton Blvd., Chattanooga, Tenn.

The Peregrine Falcon search, for Tennessee and adjacent areas, was carried out during May, 1964, by Daniel D. Berger and Charles Sindelar, under the general direction of Prof. Joseph Hickey of the University of Wisconsin. On arrival at Nashville, Mr. Ganier gave them a marked map and written descriptions of about 15 eyries known to have been at one time occupied. Also, description of a dozen potentially good sites worthy of investigation. After several weeks of careful searching they reported, after working northward into Virginia, that they had not as yet sighted a single falcon. This could have been the result of a chain of ill luck, or else verification of theory that the species is in danger of extermination from eating prey infected with poisons emanating from sprays used in the government forestry program and elsewhere. Such sprays infect the food animals on which they live. The searchers continued their work northward to Maine and we hope to report later on the results of their census.

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GOLDEN EAGLE

# THE MIGRANT

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## GOLDEN EAGLE ON ROAN MOUNTAIN

### By KENNETH H. DUBKE

A great deal of interest was created in this area when it was learned that an immature Golden Eagle *(Aquila chrysaetos)* was captured and in captivity at an abandoned house on the North Carolina side of Roan Mountain, below Buckeye Ridge. Dr. Lee R. Herndon first heard of this bird from Kenneth Clark and immediately they went and ascertained its identity and photographed it. (See frontispiece). This was followed by a quick trip by Wallace Coffey and George Craig, Bristol, and the writer to the home of Mr. Herbert Gouge, Jr., Little Rock Creek Road, Bakersville, North Carolina. It was Mr. Gouge who caught the bird and was keeping it in captivity for release at a later date.

In the course of conversation with Mr. Gouge a great deal of light was thrown on the activity of eagles at his farm and also his past experiences with them. Mr. Gouge has been raising sheep for twenty years and asserts that he has had trouble with them every spring at lambing time. It should also be noted that he has an excellent view from his house up the mountainside to observe his sheep and any other activity taking place. He doesn't recall ever seeing any in the winter but did mention noticing some in the fall, usually during October and November. His ewes usually start lambing in March and are through in about a month. This is usually the extent of the stay of the eagles. This year, 1964, his ewes lambed earlier. He can't recall the exact date, but caught this eagle at the end of January or the first part of February. He has observed the eagles catching his lambs and has seen as many as two Golden and one Bald at his place at one time.

The eagles many times would roost in a dead tree up the mountainside at a distance of about 600 yards from his house and where he could view them readily through 8x35 power binoculars. Many times he fired at them with his rifle but was never successful. This bird was caught in a trap by one toe.

Word was left with Mr. Gouge to notify the writer and others when he planned on releasing his captive. When word was received we gathered at his place on 28 June. The bird was measured and a U. S. Fish and Wildlife Service band placed on its leg by Wallace Coffey, a licensed bander. Those present when the eagle was released included Mr. and Mrs. James M. Campbell and Danny Ellis, Knoxville, Charles Smith, Milligan College, Wallace Coffey and Lucy Luster, Bristol, Herbert Gouge, Keith Kuhne and the writer.

In view of the decline of many of our birds of prey now would be an appropriate time to review the past status of what is known of the Golden Eagle in our area. The earliest reference in THE MIGRANT is by Tyler and Lyle in their summary of the "Winter Birds of Northeastern Tennessee" (MIGRANT, 1933, **4**, 26). Here they classified it as a permanent resident in the mountains. It was not common but could be found at higher elevations. In a recent conversation with Mr. Lyle he could give no further information other than what was published because most of his records were destroyed in a fire. The only known exact date of one is of an immature bird observed by Dr. Lee R. Herndon (MIGRANT, 1949, **20**, 17) on the summit of Hump Mountain 10 October 1948. This mountain is very close to Roan Mountain.

Mr. Paul Cates, Roan Mountain, has in his possession a mounted immature Golden Eagle that was shot in the area. When questioned, he could give no further information other than it was probably shot locally in the fall of 1937 or 38.

It is of interest to note that Mr. Fred W. Behrend, Elizabethton, has never found any Golden Eagles on Roan Mountain, or on any of the number of nearby peaks. He has been actively engaged in ornithological field work specializing in higher elevation birds since 1946. In the course of his studies he has been out during all seasons of the year.

In the latest revision of Pearson, Brimley and Brimley **Birds of North Carolina** (1959) there are no additional observations for this Western North Carolina area. However, they do quote Murray as observing one at Blowing Rock, in Watauga County, on 16 August 1928.

918 State Line Road, Elizabethton, Tennessee.

# A TENNESSEE NESTING OF THE BLACK RAIL

**By RICHARD NEVIUS**

A nesting of Black Rails *(Laterallus jamaicensis)* was found in Greene County, Tennessee 23 June 1964. So far as we know this is the first Black Rail nest found in Tennessee. There have been two other reports of Black Rails in Tennessee, no other mention of nesting. One was a record of a Black Rail in Greene County reported in Birds of Greene County, J. B. White, et al (THE MIGRANT **27**:5, 1956). The date of that record was 1948 and on Bluff Mountain during spring migration. The mountain ends in a vertical bluff about 300 feet above the surrounding land; the bird flew in and landed within five feet of the observer (Nevius) on top of this bluff. Another and earlier record of a Black Rail in Tennessee was in Cocke County in June of 1915. Mr. N. F. Stokeley collected and mounted a Black Rail which was taken in a hay field (THE MIGRANT, **6**:49, 1935). This bird can be seen in a collection at Del Rio, Tennessee.

The 1964 record was along Roaring Fork Creek in western Greene County and approximately six miles from the previous Greene County record mentioned by J. B. White. On 23 June 1964 two adult and five downy young Black Rails were flushed from a red clover and grass hay field. Previous experience in mowing bottom land hay had taught that rails can best be seen from the seat of a tractor while making the last few rounds on a land, or when the amount of unmowed hay gets to a small enough area so that both sides of the unmowed portion can be seen. In other years Sora and Virginia Rails have been observed in July. This year being the first Black Rail seen in suitable breeding habitat and season and the first one known to have nested, as the young were in downy plumage incapable of flight. The site of the nesting was in what in years of normal rainfall would have been moist or even in some years wet land. 1964 being an abnormally dry year there was very little if any moisture on the surface. The actual nest or nesting material was not found and was probably destroyed by the mowing machine before the rails were seen. There had been a nest because the young were in the downy stage with no possible means of flying; the sheathed points of primaries just appearing in the fragile tiny wings. Even with very limited powers of flight they were extremely elusive and could climb a small grass stem or disappear under the new mown hay in short time and were never where they seemed to have disappeared.

The birds were not measured or weighed therefore sizes are approximate. The young birds were about one and one half inches long the first day they were seen, 23 June. The legs were as long as the body, except for a light grey color about one third the length of the bill from the base, the entire bird was black. One of the young birds was handled 23 June but no band was put on nor were any pictures taken. They were seen again in the hay 25 June and 26 June. If the young seen on 26 June were the same as those observed on 23 June they had about doubled in size.

The two adults were harder to catch than the young; the rails were not afraid of us; they were simply very adept at keeping out of reach and at concealment. Only once was an adult caught, and again no thought was given to bands or pictures. The adult was very small, possibily close in size to a week old leghorn chick. The back of the neck and the upper back was a dark reddish brown or wine color. The breast gave the impression of a dark bib. The apparent grayness of the lower back and sides was from white spots and bars, the spots on the back the bars on the sides and under the tail.

Every time the young birds were scattered the old bird would cluck them back together as a chicken would a brood of chicks. When scattered the young rails would "cheep" a high pitched note as young lost chickens do. The adult would call a soft contralto "keck" for the gathering call, it would be made two or three times then after a few seconds of silence two or three more "kecks", this would continue until all the young were back together again with the adult. The high "cheep" sound of the chick would soften as they got back to the adult and would become more like a soft "purr" again as young chickens do when they are in contact with the hen. At one time, after almost all protecting hay had been cut, the adult walked out into full view making its way across and under the cut hay as it moved towards a narrow neck of short uncut grass in a usually wet swag. As this adult made its way slowly across the already cut hay it would stop and stand tall and erect and look in the direction where the young remained. Then as it moved on, it would stretch its head and neck low, parallel to the ground, and move stealthily across open places and under the new cut hay. Finally it flew a few feet to the uncut grass, typically close to the ground, wings fluttering above the body, legs hanging down. We couldn't tell whether this was a maneuver to draw us away from the young birds or not but this bird did not utter the gathering call and went about twenty feet from the rest.

The rails, adults and young, were watched for two hours with and without binoculars. Most of this time the rails were within three to ten feet of the observers.

Route 3, Greeneville, Tennessee.

# THE SEASON

NASHVILLE—June here was very nice, July hot and dry, and August one of our nicest in years, cool and every thing green. Birds seemed scarcer than usual, but so were people reporting on them. Our population of Green Herons seemed normal, but Great Blue, Little Blue and Common Egrets were almost absent for summer. Black-crowned Night Heron were scarce, but a few were reported over Bush farm late in the evenings (Joe Bush). An unusual find here was four nests of Yellow-crowned Night Herons in Buena Vista on 8 June by Jimmy Parrish. They contained a total of 10 half grown young when found and all successfully left their nests. A male Ring-necked duck was found on Bush Lake on 8 June and was still there on 14 Sept. It was on the lake on only about half the trips there, so must have roamed about a good bit (HEP). On 2 Sept. an early Marsh Hawk was seen flying across Buena Vista at about 150 feet in height. A Red-shouldered Hawk contested its right to the "air corridor" and a half minute later two Sparrow Hawks joined in the fray, climbing high and diving on the Marsh Hawk in falcon fashion. It decided to look for "greener pastures" (HEP). A few Coot remained on Bush until only a single was there on 24 June (HEP). Two were found near Ashland City on 19 July (LOT). The only fall plover to date was a Semipalmated on Coleman's Lake on 21 Aug. (LOT). The first returning Spotted Sandpiper was one at the pond in Percy Warner Park on 16 July (HCM). Our earliest ever Solitary Sandpiper was one at Coleman's Lake on 2 July (LOT). Greater Yellowlegs are always rare here in fall so the following dates are of interest; one on 28 Aug., two on 4 Sept., and one on 10 Sept., all at Coleman's Lake (LOT). The first Lesser was at Coleman's on 5 Aug. (LOT). The first Pectoral Sandpipers were three on 23 July, again at Coleman's (LOT), and only a few have been seen here to date. Also on 23 July was one Least Sandpiper, with five being the largest number to date. LOT reports Dowitchers on three trips to Coleman's, the numbers being one on 5 Aug., two on 10 Aug., and two on 26 Aug. These were not identified as to species. Another rare find of his there was a Stilt Sandpiper on 26 Aug., 4 Sept. and 12 Sept. Our first Semipalmated Sandpipers were eleven at Bush's Lake on 29 July, after a 2 inch rain (HEP). The only other reports for these were four on 26 Aug., nine on 4 Sept., and one on 10 Sept., all at Coleman's (LOT). This little 25 acre lake seems to be our only suitable habitat for fall shore birds now. Old Hickory and Cheatham Lakes are usually kept full up to the grass line. Bush farm is suitable only for perhaps 24 hours after a very heavy rain.

An early Black-billed Cuckoo was one on 18 Aug. at HCM's home. The Nighthawk migration (up to 250 birds) that we usually have for a week each year around the first of Sept. up the South Harpeth Valley did not materialize this year. Red-headed Woodpeckers remain very scarce. HCM reports two young fledged on 24 Aug. in Centennial Park after an unsuccessful earlier attempt. The high light of late summer was the unusual number of rare flycatchers netted and banded by KAG. Among these were two Yellow-bellied, one on 23 Aug. at Basin Springs and one 6 Sept. at Two Jays. Most unusual were **ELEVEN** Traill's; two on 30 Aug., five on 5 Sept., three on 6 Sept., and one on 12 Sept., all at Two Jays except that the Aug. record was at her farm, Basin Springs. One Least was banded at the farm on 30 Aug.

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Other than a few Martins there were no Aug. reports of migrating swallows. Our first Swainson's Thrush was one 8 Sept. at SB's home. Our earliest ever Veery was one banded on 5 Sept. and one each on the 6th and 7th, all at Two Jays by KAG. Bluebirds had another very bad year with only about 8 pair nesting in Percy Warner Park (ARL). As nesting Warbling Vireos are now rare here, an interesting record is one in Centennial Park on 28 June (HCM). Very early was a Golden-winged Warbler banded at Basin Springs on 29 Aug. (KAG). Also early was a Tennessee Warbler banded there by her the next day. Nashville Warblers were early this year. One was banded at home on 4 Sept. (KAG). This ties our earliest record. She banded one at Two Jays on 6 Sept. and SB had one at her home on 8 Sept. The first Magnolia reported was one at home on 29 Aug. (HCM). He also had the first Black-throated Green there on 18 Aug. Our first Blackburnian was one on 8 Sept. by SB at home. She had a Chestnut-sided Warbler there on 21 Aug. that ties our earliest fall record, MIGRANT **24**:57. Bay-breasted Warblers were early with four casualties at WSM-TV tower on 12 Sept. (ARL). Our fifth fall record for Blackpoll was also a casualty there at the same time (ARL). Northern Waterthrushes seemed plentiful with the first record being three banded at Two Jays on 5 Sept. (KAG). A Canada Warbler netted at Basin Springs on 23 Aug. was early (KAG).

Bobolink records are scarce here in fall and most are casualties. One was killed at WSM-TV tower and three at WSIX-TV on 12 Sept. (ARL). Each year Orchard Orioles seem to be all gone by mid Aug. and this year our last date was one on 14 Aug. at Basin Springs (KAG). Two early records are a Baltimore Oriole at KAG's home on 23 Aug. and a Scarlet Tanager at Radnor on 3 Sept. However, both these species have occasionally nested here. A Rose-breasted Grosbeak, plus three probables, were at Two Jays on 5 Sept. for our earliest ever record (HEP, KAG). Blue Grosbeaks seem to be continuing the spread of their nesting range into our area. Three were seen several times during Summer along the road in the South Harpeth Valley (KAG). This is the area where nesting records were made during the past two summers. A pair were seen on Highway 47 between White Bluff and Burns on 16, 18, and 23 Aug. (MCW). A family of five were found at Bush farm on 18 Aug. The female was feeding one of the young and two others were begging for food from the male, but without success. The male was there again the next day but the others were not observed and could easily have been overlooked. The young seemed able to fly as well as the adults and the finder doubts that they were raised on the farm (HEP). Four broods of Rufous-sided Towhees were raised at HCM's home, the last being fledged on 20 Aug. He believes that the female was replaced by another after the second brood.

Contributors—Sue Bell (Mrs. Wm. F.), Katherine Goodpasture, Amelia Laskey, Harry Monk, Henry E. Parmer, Lawrence Trabue, Mary Wood.

HENRY E. PARMER, 3800 Richland Ave., Nashville, 5.

AT CABINCROFT—my log cabin home and farm—Great Horned Owls have always lived on the wooded hill to the east. For the past dozen years, Barn Owls have lived in an area of big old trees to the west. This year, no Great Horned had been near the house but a Barn Owl had ranged, every night and all night long, over an open valley and stretch of hillside thicket between the house and the big trees, incessantly sounding his snoring note.

Whip-poor-wills spend one night with us in the spring, and it has always been either April 22 or April 24. We never heard one at any other time; they evidently always by-passed us in fall migration. But this year a Whip-poor-will called, at deep dusk, on 21 August from the thicket west of the house. The Barn Owl already was snoring over the valley. The calls of the two birds drew steadily nearer together until they sounded to be at the same spot. Then a Whip-poor-will call stopped on the first note, and the owl was silent. The owl resumed his racket after a quarter of an hour but the Whip-poor-will was not heard again.

Three days later, at dim dawn, a flock of crows intercepted the Barn Owl as he started to bed in his big tree hole. All that day long till dark, they mauled him through the thickets. That night and for several nights following, the valley was silent — until the Great Horned Owls came. One night, toward morning, they sang their duet from a great tree whose branches overhang the house.

Q. Is the Barn Owl, not the Great Horned, the boss bird of a range? Did the big bird dare come only when the smaller one was silenced and disabled?

The Barn Owls — two of them now — have resumed patrol of the valley. The Great Horned have retreated toward their eastern hill.

Another question and I am done.

Ever since I can remember — and that is more than four score years — Chimney Swifts have nested in two of Cabincroft's three chimneys. They came as usual this spring but they did not nest and soon they disappeared.

Did the Barn Owls have anything to do with it? Can and do Barn Owls take their prey on the wing, as they would have to do with Swifts? Or would the mere proximity of the noisy owls have driven the Swifts from their nesting places?

The Barn Owls raised two young last spring. They had gone away on their own before the Crow flogging but for some time they ranged our valley with their parents. Quite the absurdest noise that you will ever hear is that of a young Barn Owl learning to talk.

DIXON MERRITT, Route 6, Lebanon.

KNOXVILLE—Mrs. Maxie Swindell made several early records of sandpipers at the Sterchi Bait Farms: 1 Solitary and 3 Semipalmated Sandpipers on 17 July, 3 Pectorals on 31 July, 7 Least Sandpipers and 3 Common Snipe on 15 August. Also early at the same place were 10 Blue-winged Teal on 15 August and 1 Green-winged Teal by Jim Campbell, on 5 Sept. Other records which are earlier dates than usual are of a Canada Warbler on 5 August (Mrs. Kenneth Sanders), Baltimore Orioles on 7 and 14 August (Mrs. Swindell and Sanders), Rose-breasted Grosbeak on 8 August (Mrs. Swindell) and a few days later (Dorothy Williams), and about four Sora Rails at two different places on 20 and 22 August (Jim Campbell).

Some uncommon summer records were of a Black-billed Cuckoo on 2 August and 2 immature Yellow-crowned Night Herons, 18 August, all seen by Mrs. Swindell. Another such was of a Whip-poor-will made by Mrs. Sanders on 23 August.

Seen by Joseph C. Howell on Norris Lake were a male Peregrine Falcon on 9 Sept. and 10 Common Terns, 1 Forster's Tern, and 1 Caspian Tern on 12 Sept.; there are few records in this area of the latter two species.

JAMES T. TANNER, Route 10, Knoxville 20.

GREENEVILLE—The season from 1 June to 31 August has been unusual, at least weatherwise. The early part was exceptionally dry, while the last part was wet, with a good growth of grass and seeds and fall fruit. There was 4.6 inches of rain in June, all during the first part of the month. In July we had only 5.2 inches, but in August we had 8.2 inches, most of it in the last week of the month.

Beginning 9 June and continuing for about two weeks a Warbling Vireo made daily trips through the yard singing (Nevius). On a hike 14 June to Camp Creek Bald and a ridge nearby, we saw and heard Pine Warbler, Prairie Warbler, Ovenbirds, Black-throated Blue Warblers, Canada Warblers, Hooded Warblers, Blue-gray Gnatcatchers, Veerys, and Winter Wrens. On 23 June Black Rails were found having nested (see Round Table Notes). 30 June a Short-billed Marsh Wren was found along Roaring Fork Creek (Darnell, Nevius). A Yellow-crowned Night Heron was discovered in a barnyard along Hoover Creek 10 July and an immature and one adult were seen in the same location 12 July (Nevius).

A Field Sparrow nest with eggs was found 27 July and a Prairie Warbler was seen the same day wandering from a known nesting location. Blue Grosbeaks were singing through July and August. One pair was feeding young 8-10 August and the male sang through 21 August (Darnell). A male in the north side of the county continued to sing a week later (Nevius). On 12 August and again 17 August a Little Blue Heron was seen in the same place. Baltimore Orioles continued to damage a grape crop the last of August (Darnell).

On a trip to the western end of the Smokies 3, 4 and 5 August two immature Golden Eagles were leisurely observed at the Hall's cabin site near Siler's Bald and all field marks easily distinguished (Clinard, Nevius). On 23 August at Davy Crockett Lake Green Herons, Little Blue Herons, Blue-winged Teal, Solitary Sandpiper, Black Terns (8), Redwinged Blackbirds (1000) and Baltimore Orioles (Darnell, Nevius) were recorded. Five Virginia Rails were in a red clover hay field 24 August. On the last day of the month a Great Blue Heron was seen.

The food supply for birds seems to be good this fall. We are seeing more Bobwhite and Mourning Doves than last year.

RICHARD NEVIUS, Route 3, Greeneville, Tennessee.

BRISTOL—The summer quarter in our area produced a few rather interesting records both in nesting and migration.

Foremost on our list is the discovery of the first known nest of the Traill's Flycatcher in Virginia. A nest with three young was located on 26 June at the Stone Mill Marsh in the edge of Abingdon, by Roger Stone and the writer.

The second nest of the Blue Grosbeak found in Sullivan County was under construction on 2 July near Observation Knob Park (WC-RS). The nest contained three eggs on 10 July. (See Round Table Notes).

Other nests of interest include a Warbling Vireo high in a Sycamore near the Country Club on 2 June (WC-HH); a Prairie Warbler's nest with five eggs near Painter Creek Dock on South Holston Lake, 12 June (WC-RS); what appears to be a rather late active nest of Bobwhite on 26 August with four unhatched eggs, nine hatched eggs and the young present at the nest (WC-HH-BJ).

Migration began early for the Broad-winged Hawk. The earliest record for a flight at Mendota Fire Tower came with 19 hawks on 13 August (WC-RS). We were not tremendously surprised on 27 August to record two Caspian Terns at South Holston Lake. However, we followed with another observation on 28 August and again on the following day when some 60 individuals were present (WC-RS). They remained until 31 August when only six were recorded with eight Common Terns. The highlight of this influx was 30 August with a count of 135 flying by a point on Boone Lake (WC-KD-CS). Most of this group was Caspian and a few were Common. None was recorded on 1 September.

In downtown Bristol we observed a possible migration of the Common Nighthawks on 4 August when 32 birds passed over the city and out of sight to the South. Similar observations for flights in the same direction were recorded on 24 August (30) (RS) and 28 August (120) (WC-GC-RS).

Reports of the Bald Eagle appearing in summer on South Holston Lake were verified with observations as follows for the month of August: 19th (1—adult, 1—immature) (JA); 29th (1—adult) (WC); 30th (1—adult) (RS). Area residents and a boat dock operator report these birds as having been seen regularly in the Big Creek section all summer and during summer in past years. The possibility of these being birds from breeding grounds farther south is highly probable.

Other notes of interest are: Great Blue Heron 30 August; Little Blue Heron 18 August; Blue-winged Teal 30 August (3) (WC-KD-CS); Coopers Hawk 4 August (3—immatures) (RS) and 11 August (2—immatures) (RS).

A few scattered shorebird records from migration: Spotted Sandpiper 1 to 5 regularly since 22 July; Least Sandpiper 30 August (7); Semipalmated Sandpiper 30 August.

Only two summer records for the Red-bellied Woodpecker came on 21 August and 22 August. The Red-headed Woodpecker population of young birds of this season appears good with many observations of young in the Fairmont and King College areas. A single report of a Hairy Woodpecker 31 July (RS) near Paperville.

Cliff Swallows were observed regularly from 13 August to the 28th of August. Many seen in migration passing the Mendota Fire Tower. Peak observation was 1000+ near Mendota, Virginia 18 August (WC-HH-RS). Purple Martins departed 2 August from area nesting houses (CB).

Data was collected to determine the summer status of the Loggerhead Shrike in Sullivan County with records above 1600 feet elevation as follows: 12 June Hickory Tree section (WC-RS); Weaver Pike 5 July (RS); 8 August (DC-WC-HH); 18 August (WC-HH-RS); 23 August (WC); 29 August (WC). We have no records below this elevation.

Additional dates of interest include: Cedar Waxwings present until 3 June (15); Yellow-throated Vireo 28 August. Large flights of blackbirds could be seen flying to roosting areas by late June and a check of this area, along the Volunteer Parkway, on 6 July indicated approximately 100,000 individuals (WC-HH-RS). The composition of the roost appeared to be about 1/3 Cowbirds and the remainder evenly divided between Common Grackle and Starlings. The roost had shifted to northeastern Bristol by late August.

CONTRIBUTORS—Judith Abbott, Claude Buckles, Don Coffey, Wallace Coffey, George Craig, Kenneth Dubke, Harvey Hawk, Ben Johnson, Jr., Charlie Smith, Roger Stone.

WALLACE COFFEY, 508 Spruce Street, Bristol.

ELIZABETHTON—This seasons observations were about what one would anticipate, however, some unusual records were also noted. The first Great Blue Heron (1) of the season was noted on 4 August and present regularly with two noted on 29 August. A single Common Egret was observed on 15 July and another at Austin Springs on 30 August. Little Blue Herons (6) on 15 July then more (7) on 19 July with this population being constant till 6 August, then gradually disappearing till only one on 17 August. Also, a single was noted at Austin Springs on 30 August.

A male Lesser Scaup and a female Common Goldeneye have been present on Wilbur Lake all summer. The Goldeneye has been present for over a year now, while the Scaup arrived this past spring. Records of the Black Vulture (4) were made near Jonesboro on 15 June. A single Osprey was noted at the Roan Creek area of Watauga Lake on 12 June (KHD). Semipalmated Plovers were observed on the following dates: (1) 26 July; (1) 4 Aug.; (3) 6 Aug.; (1) 8 Aug. and (1) 29 August. One Pectoral Sandpiper on 29 August. First Least Sandpiper on 26 July with peak numbers (11) 29 August. Semipalmated Sandpipers (2) only on 29 August and also one Western Sandpiper on the same date (KHD & LRH).

A new nesting area for the Traill's Flycatcher was located in Johnson County this year as well as some effort made to check on the other known nesting areas. The area near Elizabethton was not checked because most of this area has been destroyed, though a pair or two may still be nesting there. The areas described by Herndon (MIGRANT 1960, **31**, 55) at Shady Valley and Laurel Bloomery were searched. There were many birds singing in Shady Valley but still no nests could be found (WC). Two birds were singing at the Laurel Bloomery site, on 21 June, but like near Elizabethton some of the nesting habitat had been destroyed. No nests were located on this site. Also, on 21 June, between US 421 and Roan Creek near the Silver Bell Motel at Shouns two birds were singing and one nest was found under construction. On 24 June this nest appeared finished and when checked again on 7 July three eggs were present. The final check on 15 July revealed three young about 4 or 5 days old.

Interesting was the lone Tree Swallow in Shady Valley on 14 June (KHD). A single Bank Swallow was noted on 13 August (KHD). Cliff Swallows (10) were reported on 2 Aug. and over a hundred on 4 Aug. with the last being a single on 30 August. In Elizabethton Purple Martins were still at a nesting box on 14 Aug. (BK).

It appears we can't locate the Bewick's Wren anymore, however, they are still found on some of the higher mountains (FWB). A singing male Short-billed Marsh Wren was found singing in a field of orchard grass and clover near the junction of Roan Creek and Watauga Lake 6 Aug. (HPL, LRH). The Loggerhead Shrike is not common in the Elizabethton area so the finding of two adults feeding a young bird on 9 June near Milligan College is of interest (CS).

Swainson's Warblers have again been noted in Shady Valley and a single male Golden-winged Warbler was singing every day from 25 May to the end of June at 1700 feet elevation near Erwin (JB). Three male Bobolink were found in Shady Valley on 6 June and two on 14 June. No females or evidence of nesting could be found.

There were several reports of the Baltimore Oriole. A pair was again noted regularly in Hunter and also about a mile or so away from this pair another male was heard singing consistently (ED). On 6 June a pair was noted in Shady Valley and a male near Shouns on 21 June. On 9 June at Elizabethton a male was observed carrying food in his bill.

Blue Grosbeaks were heard singing on 21 June and 19 July in the Roan Creek area of Watauga Lake and a single Dickcissel was noted singing at Neva on 28 July (KHD).

Contributors: John Barnitz, Fred W. Behrend, Wallace Coffey, Ed Davidson, Kenneth H. Dubke, Lee R. Herndon, Mrs. Betty King, Howard P. Langridge and Charles Smith.

KENNETH H. DUBKE, 918 State Line Road, Elizabethton, Tennessee.

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### THOMAS E. McPHERSON 1900 - 1964

On 12 July Thomas E. McPherson died suddenly of a heart attack while on vacation visiting relatives in Indiana. He was a graduate of East Tennessee University; attended the University of Virginia; did graduate work at Duke University and the University of Tennessee. He taught in the Hamilton County School System and at Milligan College. From 1945 until his death he was employed as a chemist by the North American Rayon Plant a division of Beaunit Mills, Inc., Elizabethton. Having been reared on a farm in Virginia, he was always interested in nature subjects, however, it was not until 1957 that he became affiliated with the Elizabethton Chapter of TOS. He enjoyed the out of doors and it was a particular thrill for him to remove birds from mist nets and release them after banding as he assisted with the Operation Recovery program. His jolly good humor and companionship will be greatly missed by his associates. We express our deepest sympathy to the family.

LEE R. HERNDON.

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## PRESIDENT'S MESSAGE

Dear TOS Members:

Greetings! as we approach the fall and go into our 1964-65 program.

A question has arisen with one chapter as to the year, of our organization — when it begins and ends. Because of this inquiry, we wish to refer you to the June 1964 issue of THE MIGRANT, page 33. You will note that Article V, Section 1 of our Constitution was changed at our 1964 Annual Meeting to read that newly-elected officers would assume their duties at the close of the meeting at which they were elected. This refers, of course, to the State officers and the Annual Meeting in May, but in the past the chapters have been guided by the procedure of the State Organization in this respect. Our opinion is that chapters should have their elections before the first of May as in the past, and the newly-elected officers would assume their duties 1 May. Our dues become due 1 January of any year. This allows plenty of time for the State Treasurer to receive all dues from the chapter treasurers and have his annual report ready for the Annual Meeting early in May. In regard to the last statement, allow me to say that the State Treasurer needs help from the chapter treasurers; in collecting chapter dues promptly, reminding delinquents, and forwarding all money to him as soon as possible. Remember that receipt of THE MIGRANT hinges on prompt payment of dues. Delinquent members are not eligible to receive copies.

SUE BELL, 1617 Harding Place, Nashville 12.

## ROUND TABLE NOTES

BLUE GROSBEAK NEST NEAR BRISTOL—On 2 July Roger Stone and the writer discovered a male Blue Grosbeak *(Guiraca caerulea)* and a female of the same species just beginning construction of a nest. The nest was located near Observation Knob Park along the dirt road between the park and US 421 Highway in upper Sullivan County.

A check of this same area on 7 July found a completed nest containing one egg. Both birds were again seen near the nest which had been located in the top crotch of a small weed plant about two feet above the ground. The nesting area was a small strip of overgrown bottom about 75 feet in width and containing hog pens which were visited regularly for feeding purposes. A pair of Indigo Buntings successfully nested within a few yards. The weed strip was bordered on one side by the dirt road and on the far side by a corn field a few feet away.

The third visit to the nest on 10 July produced a clutch of three pale blue eggs. Several days later Stone again visited the nest and found it empty and no grosbeaks were observed in the area.

On 29 August near Paperville, a possible family group of an adult male and female Grosbeak and what appeared to be three young birds were observed by the writer. The female carried food but was not seen to feed the young or go to a nest. These two observations plus a third record by Dick Raybun, of a single adult male in the Cedar Valley area of Bristol, on 24 May 1964 (MIGRANT **35**:42) comprise all known records for this species in the eastern areas of Sullivan County around Bristol.

First indication of this species breeding in the county came from Kingsport on 17 August 1958 when a fledgling was seen at the old fish hatchery by Mr. and Mrs. Arthur Smith (MIGRANT **29**:58). The first and only previous nesting record for Sullivan County was established 18 August 1962 at the new local fish hatchery near Kingsport by Mrs. Ann Switzer and son (MIGRANT **33**:50). On that date she saw a pair of Blue Grosbeaks feeding young nestlings.

WALLACE COFFEY, 508 Spruce Street, Bristol, Tennessee.

CAROLINA CHICKADEE FEEDING YOUNG COWBIRD—It seems a bit difficult to understand how a bird as large as the Brown-headed Cowbird *(Molothrus ater)* might squeeze through the tiny opening leading into the nesting cavity of the Carolina Chicakee *(Parus carolinensis)* and thus parasitize its nest. This is certainly among the first thoughts that Ken Dubke, Charlie Smith and the writer had when, after a few moments of careful study, debate, and then full agreement, we were satisfied that the tiny bird we had been watching feed a young cowbird was a Carolina Chickadee. This is the experience we were privileged to witness in the top of a pinetree on the morning of 7 June while taking part in the annual Foray at Shady Valley in Johnson County.

Of course, chickadees don't always use cavities with tiny openings and this must certainly have been the case in this particular situation. Herbert Friedman points out that, "Birds nesting in cavities with very small entrance holes are not ordinarily "available" but occasionally are parasitized, probably when the entrance to the nest is unusually large or has been tampered with." (Bulletin 233, **Host Relations of the Parasitic Cowbirds,** 1963, page 38.) Friedmann lists only two records for parasitism of the Carolina Chickadee (p. 63): "This species parallels the black-capped chickadee in its relation to the brown-headed cowbird. The similarity in appearance and in habits of the two chickadees probably reduces them to a single entity as far as the parasite is concerned. Only two records have come to my notice, both from Maryland and both by E. J. Court . . . . April 25, 1934 . . . . May 25, 1934." In both cases the records refer to nest with eggs and Friedmann does not list sight records of young birds being fed out of the nest.

As a matter of record, the writer has data on file for four additional species that have been observed feeding young cowbirds. They are as follows: Eastern Phoebe 10 May 1963 (MIGRANT **34**:45); Worm-eating Warbler 19 June 1964; Yellowthroat 27 June 1963; Blue-grey Gnatcatcher 1 June 1963. All observations were by the writer and in the Bristol area.

WALLACE COFFEY, 508 Spruce Street, Bristol, Tennessee.

United States National Museum Bulletin 233, Washington, D. C., 1963, p. 63.

SUMMER RECORDS OF THE SHORT-BILLED MARSH WREN—The long history of somewhat sporadic summer records of the Short-billed Marsh Wren *(Cistothorus platensis)* in Tennessee and other southeastern states has never satisfactorily answered the question as to whether these birds actually are regular (but very uncommon) breeders in these areas. The following recent observations should add to the confusion.

While in Nashville in early August, 1964, I took a field trip down the Cumberland River bottoms to Ashland City (Cheathum County) and beyond to the Cheathum Dam. This is an area which I frequently visited while living in Nashville, yet without ever seeing a Short-billed Marsh Wren. On this particular day, on 3 August, I was amazed to find six of these wrens scattered in three locations. The first wren was found about one and a half miles west of Ashland City, at the west end of the highway bridge over the river. This singing bird was in tall grass near the edge of a freshly cut field. The other Short-billed Marsh Wrens were found down river (northwest) from Ashland City near a small dirt road which runs alongside the Cumberland River and the sloughs known as the Ashland City marshes. Four of the wrens were found in a large field about two miles after turning off the highway north of Ashland City. This field contained a thick growth of grasses, sedges, Lespedeza and scattered larger weeds. There were no marshy areas. Three wrens were heard singing at widely scattered parts of this field and the fourth bird was located when it began giving its short buzzy note. Two of these wrens were seen well and both exhibited some territorial behavior. Other species in this field were Eastern Meadowlarks and Dickcissels. The latter were seen feeding their fledged young. The sixth wren was located at the near end of the first slough as one continued on the dirt road. This was about a mile beyond the area where the four were found. This wren was also in full song, in a marsh of tall grasses and sedges.

My limited time did not permit further investigation of these wrens.

Upon returning to Nashville and discussing my find with various people I was surprised to find out that Harry C. Monk and Henry E. Parmer had located a singing Short-billed Marsh Wren two years ago on 28 July, 1962. Their observation was made in the same area as the last wren I had seen.

JOHN C. OGDEN, Dept. of Biological Sciences, Florida State University, Tallahassee, Florida.

CATTLE EGRET IN GREENE COUNTY.—On the morning of 24 April, 1964 (MIGRANT 35, 39, 1964) four white birds stood among the Angus cattle in our bottom pasture. They were about 400 yards from our house and well back from the banks of Roaring Fork Creek, which was running full. A closer look with glasses afforded ten minutes of excitement, as we could see these were not the larger Common Egret and that they were conspicuously plump looking, not slender as the Snowy Egret. The heads and upper backs looked as if washed in brownish, muddy stain, this coloration being very noticeable in otherwise immaculate plumage.

Following a gunshot from the roadside beyond our land, the herons flew up the bottom, perching in the top of an osage about 500 feet from us. We realized we were unable to describe bill or leg color other than that we did not see outstandingly yellow or black color in the bill and we were sure the feet were not yellow.

Richard Nevius crossed the creek some distance above the herons and moved down towards them in the shelter of the trees. He thus approached within about 100 feet when the restless birds again flew, moving across the hay fields and on to the trees of the far hill above a neighbor's pond. We had a good view of their manner of flight. They moved, not with the leisurely, slower flight of the Common Egret, but with a faster wing movement. The wings spread in flight were a pure white without any tinge of color in the primaries. We do not know the Little Blue Heron, but because it is described as slender and, in the immature stage, as being "snowy white with a tinge of blue in the primaries," we believe these four could not have been Little Blue Herons.

The neighbor, above whose pond they were last seen, supplied the information that these birds had also been in the bottoms the previous day. He described them as "white shitepokes," and asked us if we had ever seen the "big white cranes." He thus confirmed our observation that these were small (though they were not so small as Green Herons), and he had noticed that they were not the Common Egret.

RUTH NEVIUS, Route 3, Greeneville.

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PARTIAL SUMMER DIET OF A BROWN THRASHER—On 14 August 1964, an adult Brown Thrasher *(Toxastoma rufum)* cornered a young Hog-nosed snake on a blue grass lawn. The snake was the size of a common wooden lead pencil in diameter and approximately 10 inches long. The Thrasher couldn't handle the snake on the soft grass because the snake depressed into the grass when struck by the bill. To stop this advantage by the snake the Trasher caught the snake in the middle and flew about 25 feet to a bare spot and dropped it on the bare ground. The bare spot was approximately 10 by 15 inches and had been used during the winter as an area on which to feed bird seeds. The spot was two feet from the foundation of the house and five feet from a window. When the snake struck, the bird jumped back then darted forward to strike at its head. Always the bill struck the head unless the snake was trying to leave the bare spot, then the tail or the middle of the body was the target and the snake was dragged back to the bare ground. After five minutes of sparring and striking the Thrasher had its prey dead. After the snakes death the Thrasher continued to peck at the head end and after another five minutes the bird flew away with the entire snake inside it. The snake went down head first and whole.

The fight on the bare ground and the eating took place within five feet of three observers watching through a window.

RICHARD NEVIUS, Route 3, Greeneville, Tennessee.

AN ADDITIONAL SNOWY OWL RECORD FOR 1930 — The casual southward migration of the Snowy Owl (*Nyctea nyctea*) (Linnaeus) to Tennessee has always been of considerable interest to the bird students of our state. Recently I discovered an additional Tennessee record for the species while checking through a back issue of **The Raven, 4**:5-6.

In this particular issue Mr. Fred M. Jones (living in Bristol at that time) reported: "I saw three specimens this season (1930-31), one in James City Co. (eastern Virginia), one in Scott Co., and the third in Sullivan Co., Tenn. . . . The Scott Co. owl flew out of a hollow beech tree when I pulled on a grape vine growing on the tree. A farmer killed the Tennessee owl in his pasture field, where it was sitting on a fence post." Scott County, Virginia is adjacent to and just north of Sullivan County.

**The Migrant, 2**:7 noted four records of the owl in Tennessee during this particular winter. Observations ranged from 3 December to 31 December 1930. One of the four owls of that winter was found in this same general area: "Another was shot near Johnson City on December 31 and sent to Knoxville, where it was seen by H. P. Ijams." A check with Mr. Robert Lyle, of Johnson City who was very active during that period and a friend of Mr. Jones, revealed that in his opinion, the owl from Sullivan County and the one shot near Johnson City were not the same record.

Arthur C. Bent in his **Life Histories of North American Birds of Prey,** page 370, gives the winter of 1930-31 as one of the ten winters of principal heavy invasions of this species in North America.

To the best of this writer's knowledge this record is only the eighth such record for this species in Tennessee since 1918 and these evidently are the only such records known.

JOHN WALLACE COFFEY, 508 Spruce Street, Bristol, Tennessee.

AN EGG WITHIN AN EGG—A very large hen's egg was brought to me recently with the request that I blow out the contents so that the owner could preserve the shell. It was of normal contour, measured 3⅛ inches in length and 2¼ inches in diameter. (Store eggs graded "large" measure 2⅜ by 1¾). It had been laid by a large Plymouth Rock hen which the owner also brought along.

On drilling a hole on one side and attempting to blow out the contents with a blowpipe, I found that only the white or albuminous contents came out. Inserting the drill in the hole, I was surprised to find that there was another hard-shelled egg inside of apparently normal size and shape. There being no way to hold, drill and empty the inner egg, I left it as it was. I advised the owner to fill the emptied space with denatured alcohol and to keep it in a jar of same.

What apparently happened was that the hen for some reason was prevented from laying the inner or normal egg the day it was formed. The next morning, using the inner egg as a yolk, she proceeded to form the white about it and enclosed the whole within a large shell. She was then faced with three alternatives; to call for a caesarian operation, to die, or to pass the abnormality. With a high degree of capability, she chose to do the latter.

ALBERT F. GANIER, 2112 Woodlawn Dr., Nashville 12, Tenn.

YANKEE YELLOWTHROAT IN TENNESSEE — Early in June we heard an unfamiliar bird song along Roaring Fork Creek in western Greene County. Upon hunting the bird down we found that the singer was a Yellowthroat *(Geothlypis trichas)*. On comparison with bird songs recorded by the Federation of Ontario Naturalists (Gunn and Barror) we found the song the same as the fourth song they recorded in June in northern Ontario. The song was somewhat similar to that of the Warbling Vireo. Apparently the song was recognized by other Yellowthroats, as a singing male on up the creek sang from his territory in response to the singing of the Ontario song.

If this particular bird raised any young ones they had Tennessee accents. The bird stayed in the same territory until 8 August, and was heard singing every day until that date.

MRS. BEN CLARK, 402 Crockett Lane, Greeneville, Tennessee.

## BOOK REVIEW

THE WORLD OF BIRDS, by James Fisher and Roger Tory Peterson with illustrations by Roger Tory Peterson. Doubleday & Company, Inc., 277 Park Ave., New York, N. Y. 10017, 1964. 288 pp, (Pre Christmas price $17.95) $22.95.

Recent research by the authors reveal that fully 8,580 good species of birds have inhabited the earth and some may be found from our hottest driest deserts to the frigid polar regions and all intermediate climates and habitats including the oceans.

Several hundred full-color paintings by Roger Tory Peterson grace the pages of this book, representing many of the 154 families now living. A world map in color indicates areas of relative abundance of the species. Ninety six pages are devoted to color maps indicating the areas of the world in which the various orders and suborders normally occur. Included are the fossil and extinct species as well as the geologic era in which they occurred.

The most populous country birdwise is Columbia, S.A., where, in 1963 over 1700 species were recorded. This is more than twice the number of continental United States and Canada combined.

The wide variety of birds is shown by their anatomy, feather coloration, adornments, feet, wing adaptations and many other peculiar characteristics. The various other phases of life, such as song, courtship, nest building, egg laying, eggs, incubation, feeding of young, habitats, migration and many other features are treated briefly. The equipment necessary for bird study, record keeping, bird clubs, censuses, conservation, trapping, banding, photography and even hunting are discussed.

A very important "Red List" of 143 species in danger of extinction or perhaps already extinct and a "Black List" of species believed to have become extinct since 1600 are included. A selected bibliography of around 600 references suggest further reading on the subject.

LEE R. HERNDON, 1533 Burgie Place, Elizabethton.

Errata: THE MIGRANT; Vol. 35. (1) p. 36 paragraph 3 — "Only one Bobolink was reported, a male at Bush on 12 April (HEP)." Should read ". . . . 12 May (HEP)." (2) p. 36 paragraph 4 — "A Lark Sparrow . . . . near Fernvale on 9 April (AFG et al)." should read ". . . . 9 May (AFG et al)." (3) p. 45 in the table headings, the last two column headings, Elizabethton and Bristol, should be reversed to correspond to the correct counts.

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| GRACEY, JAMES M., 2611 West End Ave., Nashville 5 | 1963 |
| GRACEY, MRS. ROBERT J., Rt. 3, Clay Lick Rd., Springfield | 1963 |
| GRAY, DR. AND MRS. DAN, Route 1, Columbia | 1962 |
| GREENE, MR. AND MRS. PAUL W., 3205 Marlborough Ave., Nashville 12 | 1963 |
| GRIMES, SAMUEL A. SR., 4627 Peachtree Circle E., Jacksonville, Fla. | 1962 |
| GROCE, MR. AND MRS. A. B., 500 Lynnwood Blvd., Nashville 5 | 1961 |
| GRUNDSET, E. O., Box 1115, Collegedale | 1960 |
| HAGEN, MISS VIRGINIA, Gladstone Apts., 3803 West End Ave., Nashville 5 | 1961 |
| HAILE, MRS. JAMES, PO Box 226, Cookeville | 1958 |
| HALL, GEORGE A., Dept. of Chemistry, West Virginia Univ., Morgantown, W. Va. | 1962 |
| HALL, GORDON E., Box 110, Norris | 1962 |
| HALL, MRS. J. S., 9 Orlando Drive, Chattanooga 5 | 1954 |
| HALL, MISS LOUISE, 2510 Kensington Place, Nashville 12 | 1951 |
| HALVERSTON, MR. AND MRS. NAT, Route 2, McDonald | 1960 |
| HAMMACK, MR. AND MRS. R. A., 701 5th Ave. W., Springfield | 1962 |
| HANCOCK, JAMES W., Rt. 1, Princeton Road, Madisonville, Ky. | 1946 |
| HANSON, NEWTON, Box 127, Bruce, Miss. | 1955 |
| HARBERT, MISS ANN, 184 Windover Cove, Memphis 11 | 1958 |
| HARPER, MRS. J. HARVEY, 700 5th Ave. W., Springfield 37172 | 1962 |
| HARRISON, RUSSELL, RFD 1, Bean Station | 1964 |
| HASH, MR. AND MRS. EARL M., 5610 Lakeshore Drive, Knoxville | 1963 |
| HAUGH, JOHN R., Dept. of Zoology, U. of Arizona, Tucson, Ariz. | 1964 |
| HAYES, MRS. MITCHELL, Charlotte Highway, Dickson | 1963 |
| HAYES, DR. WAYLAND J., 223 Lauderdale Drive, Nashville 5 | 1930 |
| HENDREN, MRS. ADRIAN C., 965 Stonewall St., Memphis 38107 | 1959 |
| HERBERT, MR. AND MRS. JOHN S., 611 Lynnbrook Road, Nashville 12 | 1960 |

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| HERNDON, DR.* AND MRS LEE R., 1533 Burgie Pl., Elizabethton | 1943 |
| HIGHBAUGH, DAVID B., 1731 Lake Apt. A-12, Knoxville | 1957 |
| HILTON, MISS ESTHER A., 322 Park St., Bristol, Va. | 1950 |
| HINCKE, MRS. W. B., 1434 Linville St., Kingsport | 1952 |
| HINDS, ROY T., Rickman | 1958 |
| HITE, MRS. WM. S., 2612 Barton Ave., Nashville 12 | 1963 |
| HOBBS, MRS. ROY K., 730 West Main St., Lebanon | 1953 |
| HODGSON, MR. AND MRS. H. C., Route 1, Old Hickory | 1958 |
| HOLDEN, B. S., 1221 17th Ave., So., Nashville 12 | 1962 |
| HOLLISTER, DR. PAUL, 1228 Virginia Ave., Cookeville | 1958 |
| HOLLOMAN, MR. AND MRS. W. R., Supt. Residence, Andrew Johnson Nat'l Monument, Greeneville | 1962 |
| HORTON, DR. GEORGE, Univ. of Tenn. Martin Branch, Martin | 1963 |
| HOWELL, DR. JOSEPH C., Dept. of Zoology, Univ. of Tenn., Knoxville | 1947 |
| HOYT, MRS. SOUTHGATE Y., Box 192 "Aviana", Etna, N. Y. | 1951 |
| HUGHES, T. P., Covington | 1960 |
| HUNT, MRS. JOHN F., 705 Westview Ave., Nashville 5 | 1952 |
| HUTCHINSON, RICHARD, 3638 Charleswood, Memphis 38122 | 1961 |
| IMHOF, THOMAS A., 1036 Pike Road, Birmingham 8, Ala. | 1949 |
| JACKSON, MR. AND MRS. JOHN B., 3817 Harding Place, Nashville 37215 | 1964 |
| JACKSON, MISS LOUISE, 1014 Noelton Lane, Nashville 37204 | 1964 |
| JAMES, MRS. C. E., 3707 Woodland, Memphis 38111 | 1958 |
| JANSON, MRS. ELSIE, Route 1, Gatlinburg | 1959 |
| JENKINS, MISS NANCY, Steed College YMCA Bldg., Bristol | 1959 |
| JESSUP, MRS. LEE C., 3313 Hobbs Road, Nashville 12 | 1959 |
| JOHNSON, MRS. AMY, 328 No. Willow, Cookeville | 1958 |
| JOHNSON, MR. AND MRS. JOHN W., 3620 Valley Vista Road, Nashville 5 | 1959 |
| JOHNSON, MRS. W. I., Orlinda Pike, Route 5, Springfield | 1962 |
| JOHNSON, MR. AND MRS. WM. M., 2815 Riverside Drive, Knoxville 14 | 1926 |
| JONES, GARRY, 4313 Evergreen Drive, Chattanooga 11 | 1959 |
| JONES, MR. AND MRS. J. P., 3421 Hopkins Lane, Nashville 12 | 1952 |
| JORDAN, COLONEL FRANK B., 3610 Hampton Ave., Nashville 12 | 1958 |
| JULIA, VICTOR, 1306 Madison Ave. Apt. 14, Memphis | 1959 |
| KAYS, MR. AND MRS. FRED, 295 Lakeview Circle, Colonial Heights, Kingsport | 1961 |
| KEETON, LUTHER F., 80 Eastland Drive, Memphis 11 | 1940 |
| KELLERMAN, MISS CATHRINE, South Pittsburg | 1964 |
| KEMPER, MRS. J. O., 316 North Main St., Springfield | 1962 |
| KILLEFFER, MISS ELIZABETH, 2116 Holly Lane, Cookeville | 1961 |
| KING, MRS. BASIL, RFD 6, Elizabethton | 1962 |
| KING, EDWARD M., 595 Shotwell, Memphis 11 | 1950 |
| KISER, MR. AND MRS. B. M., Oakview Drive, Bristol, Va. | 1959 |
| KNAUTH, CANEY, 4321 Brush Hill Road, Nashville 6 | 1955 |
| KNAUTH, MRS. HERMAN G., 4321 Brush Hill Road, Nashville 6 | 1955 |
| KNIGHT. DR. AND MRS. E. B., 1222 No. Dixie Ave., Cookeville | 1958 |
| KNOX, MISS MAMIE, Route 3, Milan | 1937 |
| KOSTKA, MRS. LES, 4836 Airways Road, Memphis 16 | 1961 |
| KRAUSE, KURT, 811 Highland Park So., Chattanooga 4 | 1961 |

LACY, MISS BETH, 3129 McClure Lane S.E., Knoxville 20 .... 1955
LAMB, MRS. JOHN S., Lake Road, Dyersburg .... 1963
LAMBETH, RONALD, Talge Hall, Collegedale .... 1964
LANGRIDGE, HOWARD P., 1421 W. Lantana Ave., Lantana, Fla. .... 1956
LASKEY, MRS. AMELIA R.,** 1521 Graybar Lane, Nashville 12 .... 1928
LEWIS, MISS HELEN K., 345 East Drive, Oak Ridge .... 1962
LINDERMAN, JERRY, Box 445, Collegedale .... 1964
LINDSEY, MISS MARTHA, 4302 Estes Road, Nashville 12 .... 1960
LINE, JAMES F., Route 1, Jefferson City .... 1964
LOFTIS, MRS. CLARON, 435 E. Spring St., Cookeville .... 1958
LOOMIS, MRS. C. C., 800 Park St., Bristol, Va. .... 1950
LORENZ, RICHARD A., 220 N. Pardue Apt. 109, Oak Ridge .... 1951
LOWERY, DR. GEORGE H. JR.,
    6255 Chandler Drive, Baton Rouge 8, La. .... 1937
LOYLESS, MISS ANGIE, Sullins College, Bristol, Va. .... 1950
LUCADO, MRS. SUE B., 9281 Herring Hill Road, Millington .... 1964
LYNN, MRS. R. E., Route 3, Cato Road, Nashville 8 .... 1951
McCAMEY, DR. FRANKLIN, Rt. 1, Box 214, Orwigsburg, Pa. 17961 .... 1931
McCARVER, MRS. DAVID, 930 Battery Lane, Nashville 4 .... 1963
McCLANAHAN, MR. AND MRS. HARVEY P.,
    858 Forest Acres Drive, Nashville 37220 .... 1964
McCRARY, MRS. JOHN W., 118 Jefferson Drive, Bristol, Va. .... 1957
MacDONALD, MRS. DONALD,
    3803 West End Ave., Gladstone Apts., Nashville 5 .... 1962
McGEE, DR. AND MRS. SIDNEY,
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McKINNEY, MISS MARGUERITE, 604 Estes Ave., Nashville 12 .... 1962
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McNEIL, MRS. GUY, 712 Piedmont Ave., Bristol, Va. .... 1959
McPHERSON, CHARLES E., 7061 Riverdale Road, Germantown .... 1951
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    118 West Pine St., Johnson City .... 1957
McSHANE, MRS. HUGH JR., Greenbrier Pike, Springfield .... 1964
McWHORTER, MR. AND MRS. J. H., 817 Goodwyn St., Memphis 11 .... 1947
McWHORTER, MAJOR JAMES H.,
    04005014, 444 So. Brainard, La Grange, Ill. 60528 .... 1946
MACON, MR. AND MRS. HERSHEL,
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MANLEY, MRS. LEON W., PO Box 5358, Whitehaven .... 1961
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MAY, ROBY D., 611 N. Main St., Elizabethton .... 1956
MAYES, MRS. B. L., 111 E. Malta Road, Oak Ridge .... 1962
MAYFIELD, AL H., 267 S. Main St., Winchester, Ky. .... 1949
MAYFIELD, DR.†,* AND MRS. GEORGE R.,
    2414 Vanderbilt Pl., Nashville 12, 37212 .... 1915, 1918

MAYFIELD, DR. AND MRS. GEORGE R. JR.,
Maury County Hospital, Columbia .......... 1961
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MEEMAN, EDWARD J., 1236 Cuba-Millington Rd., Millington .......... 1947
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MONROE, BURT L., Ridge Road, Anchorage, Ky. .......... 1934
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MOORE, DR. AND MRS. J. T., RFD 2, Algood .......... 1958
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MOORE, MRS. JACK W., PO Box 305, Springfield .......... 1962
MOORE, MRS. MYRIAM P., 9 Riverside Place, Lynchburg, Va. .......... 1964
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MOORE, MISS NELLE, 275 Palisade Ave., Memphis 11 .......... 1945
MOORE, REV. AND MRS. YATES, 275 Palisade Ave., Memphis 11 .......... 1957
MOORMAN, MISS ANNE ARMSTRONG, 309 S. Main St., Somerville .. 1935
MOREHEAD, DR. M. R., 77 Davis St., Cookeville .......... 1959
MOREHEAD, MRS. TURNER SR.,
3610 Spottswood Ave., Memphis 11 .......... 1954
MORGAN, MR. AND MRS. JOHN T. SR.,
Route 1, Box 400, Hermitage Harbor, Old Hickory .......... 1964
MORRELL, MISS ELISE,**
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MORRIS, MIKE, 302 No. Main St., Springfield .......... 1963
MORRISON, DR. AND MRS. R. S., 905 Forest Ave., Johnson City .......... 1963
MORROW, JOHN, 4787 Highway 61 So., Memphis 38109 .......... 1958
MOSS, DR. H. COWAN JR., 804 Cloudland Drive, Johnson City .......... 1964
MOUNTFORT, MISS PENELOPE, 4313 Glen Eden Dr., Nashville 5 .......... 1947
MUNRO, ALAN R., 240 Craigmeade Dr., Nashville 37214 .......... 1959
MURPHY, MRS. CHARLES B., Route 2, Brentwood .......... 1964
MYRICK, MR. AND MRS. GLEN, 833 North Drive, Cookeville .......... 1964
NELSON, MR. ROY C., 107 East G Street, Elizabethton .......... 1964
NEVIUS, MR. AND MRS. RICHARD, Route 3, Greeneville .......... 1937
NORMAN, JAMES L., 502 No. 14th, Muskogee, Okla. .......... 1953
NORMAN, MISS MABEL,
1003 East Third St., Harriet Pearson Hall, Chattanooga 3 .......... 1954
NORRIS, DR. ROBERT A., Tall Timbers Research Inc.,
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| NORTON, MISS EVELYN POLK, 2301 Elliston Place, Nashville 5 | 1953 |
| NORWOOD, JOSEPH R., 1320 Goodwin Ave., Charlotte, N. C. | 1955 |
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| NUNLEY, MR. AND MRS. H. W., Route 3, Bluff City | 1950 |
| O'BRIEN, MRS. JAKE, Route 2, Coopertown Rd., Springfield | 1962 |
| O'CALLAGHAN, JOHN J., Westmoreland Hts., Batesville, Miss. | 1961 |
| O'CALLAGHAN, T. C., Maromaku R.D., Bay of Islands, New Zealand 1-C4779 | 1957 |
| OGDEN, JOHN, Dept. of Biological Sciences, Florida State Univ., Tallahassee, Fla. | 1952 |
| OLIPHANT, W. A. JR., 3809 Hoyt St., Chattanooga 11 | 1963 |
| OLSON, MR. AND MRS. EARL F., Box 390, Norris | 1955 |
| O'NEIL, DR. A. W., PO Box 586, Falfurrias, Texas | 1961 |
| ORLEANS, MRS. SAM, Ford Place, Knoxville 20 | 1949 |
| OVERTON, MRS. E. E., 3316 Bunker Drive, Knoxville 16 | 1947 |
| OWEN, MR. AND MRS. EDWARD A., Williston | 1949 |
| OWEN, J. B., 2930 North Hills Blvd., Knoxville 17 | 1947 |
| OWEN, MRS. PAUL C., 7510 Highway 72, Germantown | 1950 |
| PADFIELD, MR. AND MRS. JAMES, Golfview Lane, Route 6, Springfield 37172 | 1964 |
| PARDUE, PAUL, 1516 Cliffside Lane, Knoxville 14 | 1953 |
| PARKS, RICHARD A., 2303 Pembrook Place N.E., Atlanta 5, Ga. | 1956 |
| PARMER, MR. AND MRS. HENRY E., 3800 Richland Ave., Nashville 5 | 1955 |
| PARRISH, JIMMY, 1821 14th Ave. No., Nashville 8 | 1962 |
| PATTERSON, DAVID E., Olive Hill 38475 | 1964 |
| PATY, JOHN, Elizabethton | 1951 |
| PAULLUS, MISS KATHERYN, 1900 Linden Ave., Apt. 3, Memphis 4 | 1959 |
| PEAKE, RICHARD H. JR., Box 163, Cullowhee, N. C. | 1964 |
| PECK, MRS. VERGIL G., 4579 Old Stage Road, Kingsport | |
| PECK, MRS. WM. T., 611 5th Ave. West, Springfield | 1962 |
| PETERSON, MRS. CONNIE, 825 No. Drive, Cookeville | 1960 |
| PETTINGILL, DR. OLIN SEWALL JR., Laboratory of Ornithology, Cornell Univ., Ithaca, N. Y. | 1939 |
| PFLUG, MISS MARGUERITE, King College, Bristol | 1950 |
| PHELPS, MRS. ELIZABETH, Phelps Industries, Skyland, N. C. | 1963 |
| PHILLIPS, DR. ALLEN R., a/c Prof. Bernardo Villa R Privada de San Lucas No. 9, Coyoacan 21, D.F. Mexico | 1959 |
| PHILLIPS, ED., PO Box 135, Collegedale | 1963 |
| PILCHER, MRS. MERITT S. JR., 3621 Robin Road, Nashville 4 | 1961 |
| PISTON, DR. AND MRS. ROBERT E., 900 Melrose Circle, Johnson City | 1963 |
| POOLE, EDWIN H., Leelanau Schools, Glen Arbor, Mich. | 1950 |
| POTTER, DR. AND MRS. THOS. P. JR., 1302 Sherwood Drive, Johnson City | 1964 |
| POWELL, ALBERT L., Route 1, Maceo, Ky. | 1934 |
| PRESTRIDGE, MR. AND MRS. C. F., 120 Pinehurst Lane, Signal Mt. | 1959 |
| PRINCE, MR. AND MRS. W. H., PO Box 621, Gatlinburg | 1962 |
| PROCTOR, MISS KAY, Board of World Missions, Box 330, Nashville 37202 | 1964 |

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| PURYEAR, MR. AND MRS. W. A., Brentwood | 1958 |
| QUINN, ROBERT, 508 Park Center Drive, Nashville 5 | 1961 |
| RABUN, MR. AND MRS. D. P., 145 Cloudland Drive, Bristol | 1964 |
| RAGLAND, MISS ELLA H., 37 South Barksdale St., Memphis 4 | 1945 |
| RANGER, MR. AND MRS. EUGENE, 907 Mockingbird Drive, Chattanooga 11 | 1961 |
| REYNOLDS, MR. AND MRS. A. E., 807 Maple, Bristol | 1958 |
| RICHMOND, MISER, Route 3, Cookeville | 1958 |
| RICKERT, JON E., 207 No. Mantle, Elizabethtown, Ky. | 1961 |
| RIGGS, MISS JENNIE, 2005 Capers Ave., Nashville 12 | 1950 |
| RINI, S. JACK, 740 W. Clover Drive, Memphis 17 | 1954 |
| RION, MR. AND MRS. WM. C., 713 S. Dickerson Rd., Goodlettsville | 1963 |
| ROARK, DR. AND MRS. KENNETH L., 1311 Woodland Ave., Johnson City | 1964 |
| ROBBINS, CHANDLER S.,** 1409 Brooklyn Bridge Road, Laurel, Md. | 1955 |
| ROBERTS, JACK S., 6016 N.W. 56, Oklahoma City, Okla. | 1962 |
| ROBINSON, MRS. J. C., RFD 1, Box 91, Brownsboro, Ala. | 1960 |
| ROGERS, MRS. CLAUD A., 610 E. First North St., Morristown | 1960 |
| ROGERS, T. L., 4804 St. Elmo Ave., Chattanooga 9 | 1962 |
| ROLSTON, DR. HOLMES III, Route 1, Bristol, Va. | 1961 |
| ROSEN, DR. AND MRS. LAWRENCE, 970 Outer Drive, Oak Ridge | 1962 |
| ROSS, MR. AND MRS. DONALD V., 408 McTeer Drive, Colonial Heights, Kingsport | 1961 |
| ROSS, HOLLIS T., West Lawn, Lewisburg, Pa. | 1933 |
| RUE, MISS ELIZABETH WAITT, Pi Beta Phi Staff House, Gatlinburg | 1960 |
| RUHR, MR. AND MRS. C. EUGENE, Route 5, Box 280B, Excelsior, Minn. 55331 | 1953 |
| SANDERS, MR. AND MRS. KENNETH B., Old Sevierville Pike, Route 9, Knoxville | 1955 |
| SCHILLER, MRS. HENRY A., 3572 Allendale Road, Memphis 11 | 1956 |
| SCHREIBER, MR.** AND MRS. DAN, New Mexico Highlands Union, Las Vegas, N. M. | 1960 |
| SCHREIBER, MR. AND MRS. EDWIN D. SR., 3518 Pleasant Valley Road, Nashville | 1963 |
| SCHUERMAN, MR. AND MRS. MAX, 3906 Woodmont Lane, Nashville | 1961 |
| SCOTT, FREDERIC R., 115 Kennondale Lane, Richmond 26, Va. | 1955 |
| SCOTT, LELAND G., Allen Drive, Gallatin | 1937 |
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| SHARP, MR. AND MRS. ROBERT K., 505 Chesterfield Ave., Nashville 12 | 1963 |
| SHARP, VERNON JR., 3312 West End Ave., Nashville 5 | 1921 |
| SHARP, MRS. WALTER, Rt. 2, Beech Creek Road, Brentwood | 1952 |
| SHARPLESS, MISS DOROTHY E., Box 38, Morristown | 1957 |
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| SLIGER, MR. AND MRS. HENRY L., 208 S. Germantown Road, Chattanooga 11 | 1954 |

SLUDER, MRS. PRINCE, Box 134, Calderwood Rural Station, Maryville ........ 1955
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SMITH, DR. RADFORD, 911 Scotland Drive, Murfreesboro ........ 1964
SMITH, ARTHUR S., Route 10, Crooked Road, Kingsport ........ 1960
SMITH, CHARLES R., Route 2, Johnson City ........ 1963
SMITH, MR. AND MRS. J. WINSTON, 4035 Skyland Drive, Kingsport ........ 1952
SMITH, MR. AND MRS. LOUIS F., 3809 Riverview Road, Knoxville 14 ........ 1954
SMITH, MISS LYNN, 3724 Oakley Ave., Memphis ........
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SMITH, MISS PAMELA, 3724 Oakley Ave., Memphis ........
SNYDER, MRS. MARK D., 1245 Chatham Rd., Waynesboro, Va. ........ 1958
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SPOFFORD, DR. WALTER, State Univ. of N. Y. Upstate Medical Center, 766 Irving Ave., Syracuse 10, N. Y. ........ 1940
SPROUSE, MISS RUBY, 300 No. Main St., Springfield ........ 1962
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STEVENSON, DR. HENRY M., Dept. of Zoology, Fla. State Univ., Tallahassee, Fla. ........ 1939
STODDARD, HERBERT L., Sherwood Plantation, Box 139, Thomasville, Ga. ........ 1955
STONER, MR. AND MRS. FLOYD, 192 Williford St., Memphis 12 ........ 1962, 1965
STRAKASH, WALTER, 101 Georgian Court Rd., Rochester, N. Y. ........ 1963
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STREET, THOMAS E., Box 8146, Greensboro, N. C. ........ 1954
STRINGER, MR. AND MRS. KIRBY, 1833 Primrose Ave., Nashville 12 ........ 1947
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STUMPF, PAUL, 609 Enquirer Ave., Nashville 5 ........ 1957
STUPKA, ARTHUR, Care Great Smoky Mtn. Nat'l Park Office, Gatlinburg ........ 1935
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TEMPLETON, MRS. GEORGE, 3208 Curtis Road, Knoxville 18 ........ 1961
THOMAS, MR. AND MRS. G. E., 20 Terrane Ave., Natick, Mass. ........ 1947
THOMPSON, MRS. CURTIS, 225 Park Ave., Milan ........ 1962
THOMPSON, CARROLL, 767 Frazier Ave., Chattanooga 5 ........ 1955
THOMPSON, MR. AND MRS. JACK W., 767 Frazier Ave., Chattanooga 5 ........ 1955
THOMPSON, MR. AND MRS. JAMES, King College Pike, Bristol ........ 1964

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| THOMPSON, MR. AND MRS. L. D., 1220 Chickasaw, Paris | 1946 |
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| TOMKINS, IVAN R., 1231 E. 50th St., Savannah, Ga. 31404 | 1963 |
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| TRABUE, LARRY, 3819 Harding Place, Nashville 12 | 1960 |
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| WETMORE, DR. ALEXANDER,* US National Museum, Washington 25, D. C. | 1937 |
| WHARTON, MISS MARY, 133 Public Square, Lebanon | 1954 |
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BIRD-BANDING, Dr. Oliver L. Austin, Florida State Museum, Gainesville, Fla.

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ZOOLOGICAL RECORD, AVES, Lt. Col. W. P. C. Tenison, Editor, British Museum, Natural History, South Kensington, London, England.

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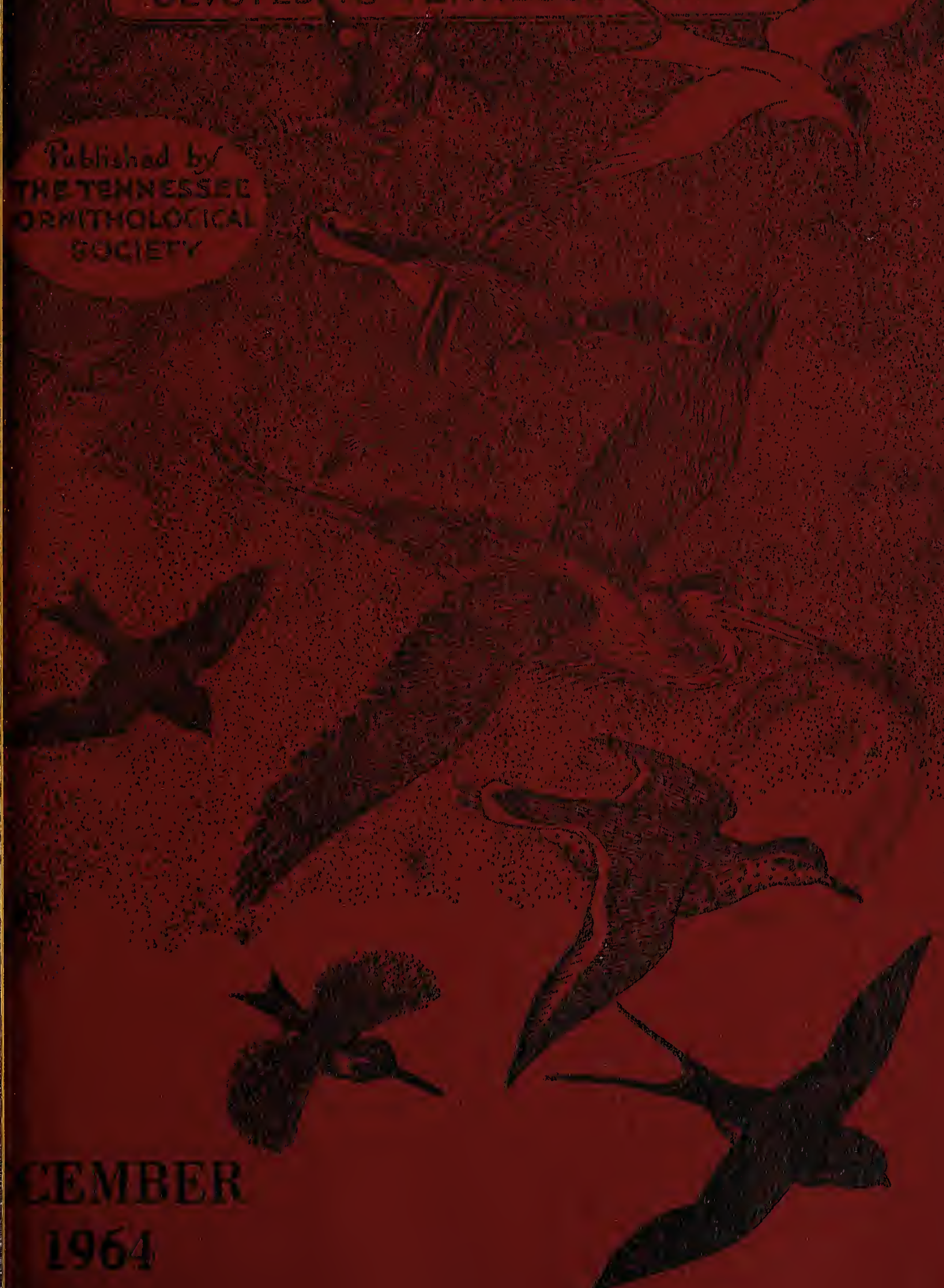

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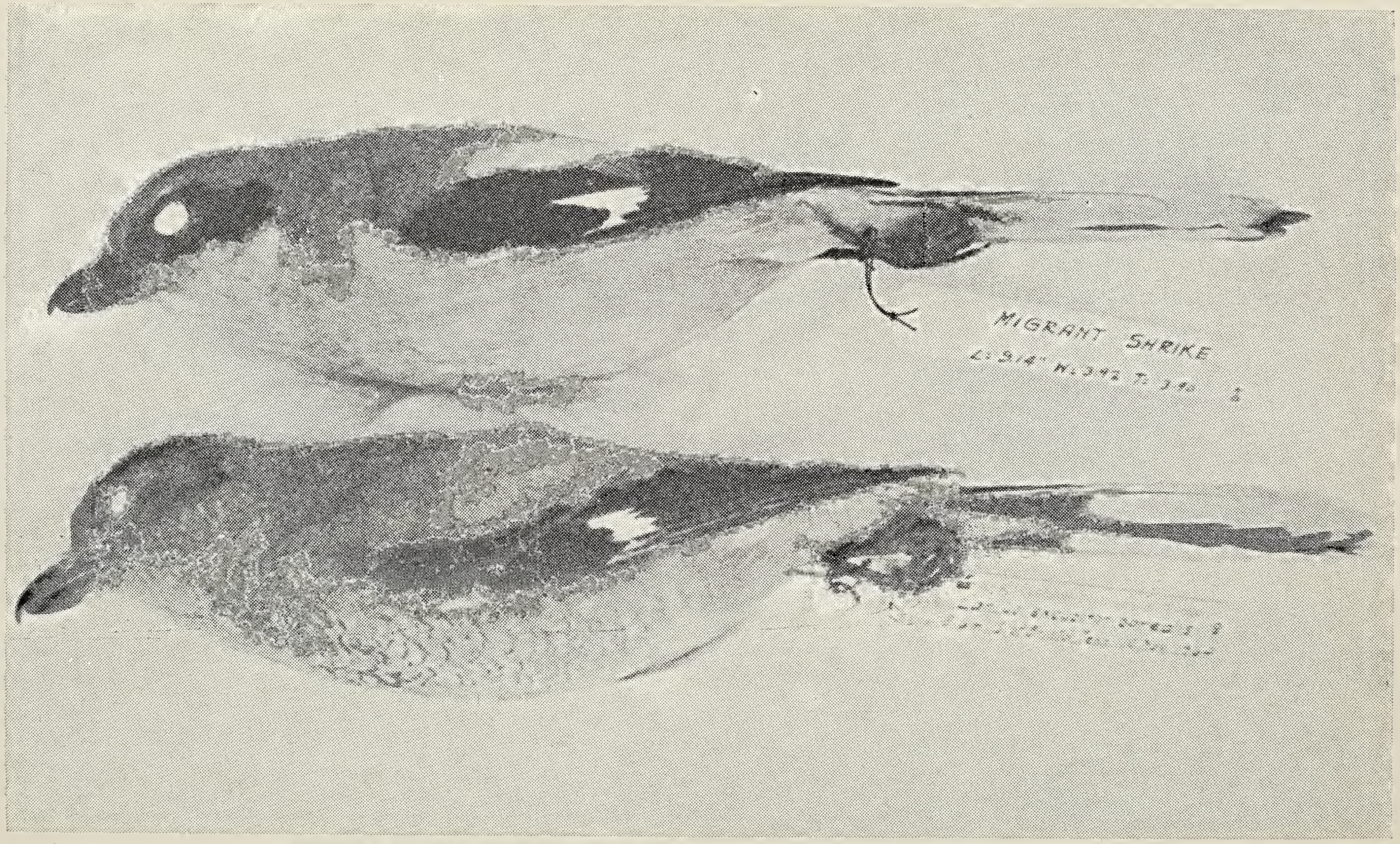

Upper: Migrant Shrike *(Lanius ludovicianus migrans)*. Side views.
Lower: Northern Shrike *(Lanius excubitor borealis)*. Photo by Henry Parmer.

# THE MIGRANT

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## NORTHERN SHRIKE AT BRISTOL — A NEW SPECIES FOR TENNESSEE

### by JOHN WALLACE COFFEY

The discovery of a Northern Shrike *(Lanius excubitor borealis)* at Steel's Creek Park Recreational Area, near Bristol, Sullivan County, Tennessee on 9 November 1964 by John Wallace Coffey and the subsequent collecting of the specimen by Coffey and Theodore Roger Stone on 10 November at the same location warrants the addition of this species to the Tennessee list.

The specimen was seen by Dr. Lee R. Herndon and Mr. Thomas W. Finucane before being shipped to Mr. Albert F. Ganier, Curator of the Tennessee Ornithological Society, at Nashville, Tennessee on 20 November. Mr. Ganier prepared a study skin from the specimen and it was sent to the United States National Museum where Dr. Alexander Wetmore aged the bird and gave support to the previous identification. Mr. Ganier informed the writer (letter: 5 January, 1965), Since I wrote last, I have heard from Dr. Wetmore. . . . He says the specimen is an immature, without question. "There is considerable variation in the amount of brown in the plumage the first fall, some being very deeply colored, and others, like your specimen, much paler. The adult at this season is light gray and white. . . ." The specimen has been placed on temporary loan in the A. F. Ganier collection at Nashville where it is currently entered as specimen #1758, a female, measuring L—9.50" (241mm), W—4.52" (115mm), T—4.23" (107mm).

The location at which the specimen was collected is approximately 14,000 feet (2.65 miles) south of the Virginia-Tennessee state line and 3000 feet from the Bristol, Tennessee city limits. The elevation is about 1670 feet above sea level.

The initial discovery and identification of the shrike was made possible after seeing a bird fly across the road while driving along Steel's Creek Park Lake on 9 November. At a glance the bird first appeared nearly as large as a Mockingbird *(Mimus polyglottos).* The characteristic flash of the white wing patch in the Mockingbird was not observed. The bird flew into the top-most branch of a leafless tree about 20 feet above the ground. At a distance of 300+ feet it appeared to be a shrike. It was possible to detect indistinct vermiculation on the breast. The 10x50 binoculars used would not allow for clear distinction at that distance and a spotting scope was used for more careful observation.

Some readers may be interested in searching for this species elsewhere in Tennessee. It is felt by the writer that continuous checking of shrikes in this area for the past five years has prepared the observer to recognize such an opportunity. For this reason, additional discussion of characteristics and the habits of the Northern Shrike will be presented here.

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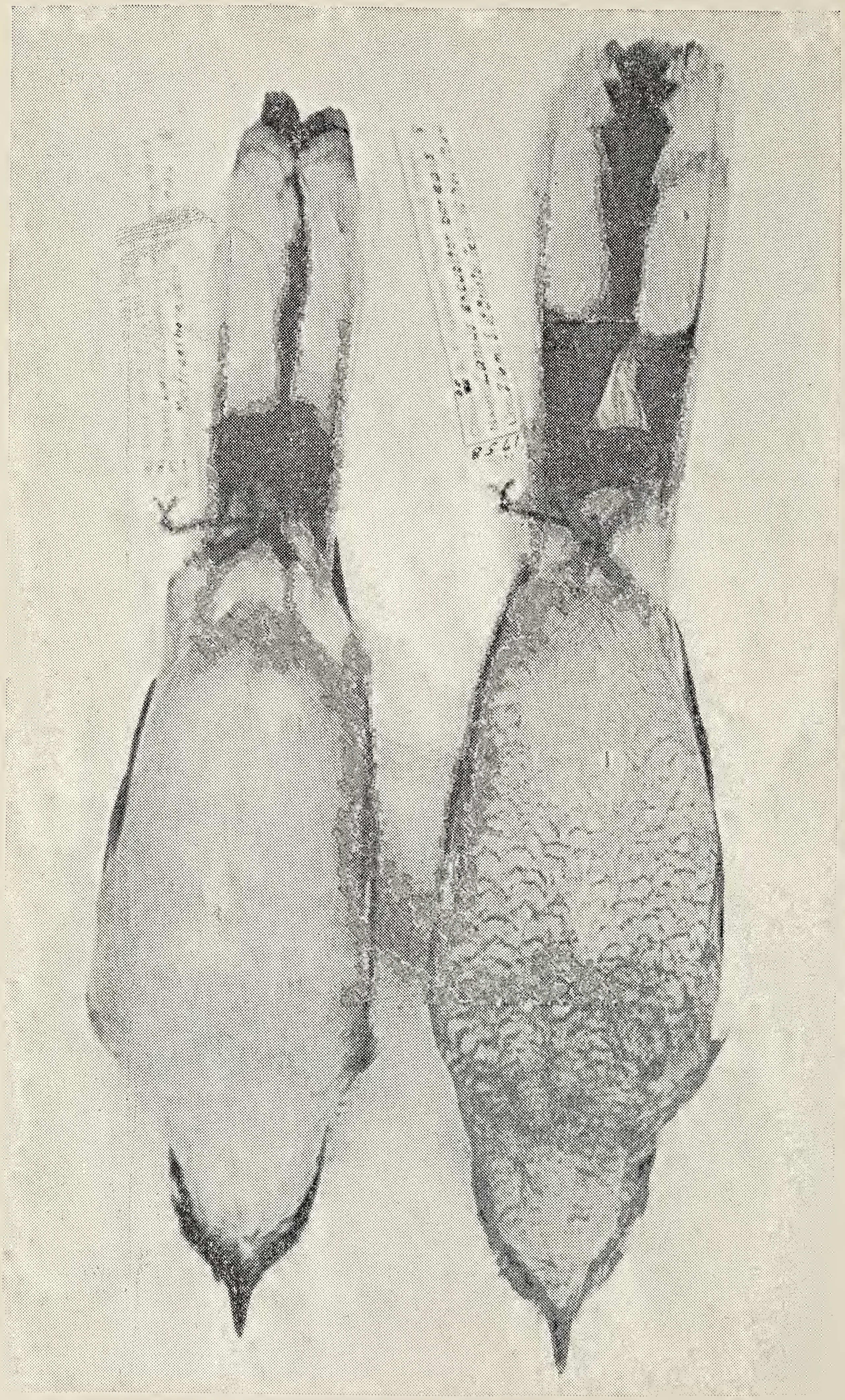

Upper: Migrant Shrike (*Lanius ludovicianus migrans*). Ventral views.
Lower: Northern Shrike (*Lanius excubitor borealis*). Photo by Henry Parmer.

By the use of a 30X telescope, it was possible to view the bird from a distance of 250 feet. The following description is taken from field notes made while watching the bird and suggest characteristics which were distinguishable in this immature bird under the conditions stated:

> ". . . . . At different times, the bird faced directly towards me, perched sideways and with its back towards me. It flew to the ground and made one unsuccessful strike returning to the same tree at a lower branch . . . . The bird appeared to be a dusky gray below with fine horizontal barring on the breast and belly extending nearly to the legs. It could be seen from 300+ feet. . . . The lower mandible had a definite light mark at the base and was light for a portion of ⅓ to ½ of the lower mandible. . . . The forehead area appeared to be slightly lighter than the crown but definitely had no signs or traces of black that could be seen . . . there appeared to be some black at the lores but it was lacking just below the eye. The black eye-line to the rear of the eye and just above the auricular patch was complete and distinct."

It must be understood that this is not a description of the specimen as it appeared in the hand but rather, a first impression of its appearance as seen in the field. The writer had never seen the species previous to this observation but had studied skins in a collection by comparison to the Loggerhead Shrike *(Lanius ludovicianus migrans)* Palmer (Migrant Shrike).

A return trip to the park on 10 November at 9:00 a.m., with Stone, found heavy fog and no shrikes. By noon a shrike was located and identified as the Northern. The bird was approached by sneaking up the back side of the hill and walking through a small stand of pines. This area is actually very open with the exception of a small stand of trees on the hill where the shrike had selected a perch tree on the edge of the wooded area. This is the same tree in which the bird had been found the previous day. Upon approach, several Mourning Dove *(Zenaidura macroura)* flushed and one flew to the perch tree and was instantly attacked by the shrike. The dove escaped and the shrike did not give pursuit. The shrike left in another direction.

After checking about three other shrikes, all of which were evidently Loggerhead, the Northern was again seen in the perch tree and Stone managed to collect the bird. It was agreed that when a reasonable view was possible of either the Northern or Loggerhead, they could be distinguished at a glance.

The flight of the Northern Shrike is recognized by its tendency to drop from its perch flying low over the ground and swooping upwards to the next perch. This specimen nearly always was seen to fly in this manner and then perch in the tip-top of a tree—a characteristic habit recorded by other observers (Peterson 1947:176 and Bent 1950:114). An interesting action that was not observed with this specimen is the act of hovering or "mousing". Bent states (1950:123), "Occasionally, it would hover like a sparrow hawk over an open space, as if looking for mice or insects." Francis H. Allen says in his notes (Bent 1950:123), "A shrike I watched mousing over river meadows in Millis, Mass., January 25, 1931, hunted mainly by hovering. It would start off with two or three bounds in the air and then rise almost vertically for perhaps six to ten feet—that is practically vertically at the top of the rise—and then hover for some time, turning its head from left to right to scan the grassy marsh. It was a very pretty performance."

The invasion of the Northern Shrike to wintering areas far south of its breeding grounds has been determined as a cycle occuring on an average of every 4.2 years and is suspected to be correlated with the well-known cycle of mice *(Microtus* spp., *Dicrostonyx* spp.) (Bent 1950:125). Mr. Ganier suggests (letter 22 November, 1964), "Its appearance at the end of a long period of Indian Summer is surprising for it is one of those species that we would expect to come in mid-winter after a hard cold front." In this area, it was shirtsleeve weather and temperatures for October were —4°F below the normal 58°F average. The first ten days of November ranged from +3° to +7° above the normal 45.9°F average. Until 20 November, temperatures continued upwards to a +19° above normal. This later temperature increase did not influence this specimen but is graphic of the season experienced during this particular period. However, immature birds generally wander more than adults — an additional factor to consider with this individual.

The above information was supplied by the U. S. Weather Bureau and the weatherman suggested that perhaps local conditions did not influence the birds appearance but that extreme low temperatures in the northern states could be considered. He suggested that warm weather in the south is usually being countered by extreme low temperatures in the north.

The A.O.U. Check-list (fifth edition) lists the winter range for the Northern Shrike as follows (page 462):

> ". . . . from southern parts of breeding range south to eastern Kansas, southeastern Iowa (Hillsboro), south-central Illinois (Big Lake), southwestern Indiana (Vincennes), central Ohio (Springfield, Zanesville), western Pennsylvania (Beaver), Maryland (Dulaneys Valley, Patapsco, Ocean City), Washington, D. C. (and adjacent Virginia), and southern New Jersey (Cape May); casually to central northern Kentucky (Lexington), North Carolina (Pea Island), and Bermuda."

At the time of publication of this paper, Mr. Ganier is checking carefully all southern records for this species in order to determine if the recently collected specimen is a probable most southerly record. Present information indicates that there may be some question as to the validity of the Lexington, Kentucky record upon which the present status in that state is based. Additional information and discussion of that record may likely by published at a later date.

The general status for Virginia is considered as a "Very rare winter visitor in the Washington region, where there are about a dozen records. Dr. A. K. Fisher took a specimen in Virginia near Washington, November 11, 1887. Freer, M. G. Tillotson and Melvin Mitchell report one seen at Lynchburg, December 26, 1950." Murray 1952:84). Dr. Ruskin S. Freer writes (December 2, 1964), "Tillotson was originally from upper New York State and had been familiar with the bird there. I largely accepted his identification, as I had not seen the bird before. I am very familiar with the Loggerhead, and this bird was definitely larger and brownish in color, so doubtless an immature."

In North Carolina, the species is considered to be a rare or accidental winter visitor, with a single specimen (immature male) collected at Pea Island, December 9, 1909 and sent to Bishop. (Pearson, 1942:293 revised). This specimen, collected on the coast, is now with the Bishop collection placed in the Chicago Museum of Natural History (Ganier, letter 25 December, 1964).

### Acknowledgments

Appreciation is due to Mr. Albert F. Ganier for the efforts he made in checking literature on the subject and in supplying valuable data gathered from his many resources and contacts with other ornithologists. Mr. Henry Parmer made the photographs of the specimen and Mr. Ganier's Migrant Shrike appearing with this paper. Dr. Ruskin S. Freer and Mr. Enno vanGelder supplied other information needed. Roger Stone aided in field work by securing the shrike.

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508 Spruce Street, Bristol, Tennessee

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A RED PHALAROPE AT NASHVILLE.—On 24 Oct., 1964, the writer found a phalarope while on a visit to Bush Lake. The south end of the lake had many patches of moss that barely broke the surface and the bird was feeding very actively in these, swimming from one patch to another at about five minute intervals. The size was too large for the little Northern, being at least that of the Solitary and Pectoral Sandpipers. The plumage was changing, probably from juvenile to winter, making a search of many color plates that night almost useless. The distance was about 200 feet, too far for an accurate view of plumage. On a return trip the next morning the bird was watched for an hour at about 80 to 100 feet. This gave a chance to revise his sketch of plumage some what. The day being clear he took 20 Kodachrome pictures of the swimming bird with a 550 mm lens, trying to get a different angle of view on each. That afternoon he returned with Jimmy Parrish and they managed to flush the phalarope in an attempt to check for wing bars and to see the tail pattern. This failed as his view was blocked for an instant and the bird was immediately behind a tree and gone. On Saturday Mary Wood flushed it and was sure it had wing bars and a black strip down the tail. On Monday Lawrence Trabue watched it for a while in a heavy rain. Then on Tuesday, 29 Oct. the writer returned and was fortunate to find the bird only five feet from the bank, and managed to drive the car to within 25 feet of it. This gave a wonderful opportunity to study plumage at close range, then a chance to flush the phalarope at only 25 feet. It did have heavy white wing bars and a tail pattern as is shown for both the Northern and Red in Peterson's. So the process of elimination (which the writer certainly doesn't like to use) left only the Red Phalarope. For final identification the slides were sent to John Ogden at Florida State Univ. and John reported back that the plumage seemed exactly like the skin of a Red there, and that all who saw the slides felt sure that the bird was a Red Phalarope. This is our first Nashville record.

HENRY E. PARMER, 3800 Richland Ave., Nashville, Tenn. 37205.

# DATA FROM THE NASHVILLE T. V. TOWER CASUALTIES AUTUMN 1964

### By AMELIA R. LASKEY

During the 1964 autumn migration at Nashville, casualties at two television towers totaled 1940 birds of 73 species, with WSM accounting for nearly twice as many as WSIX—1275 of 61 species and 665 of 58 species, respectively. Possibly the heavier toll as WSM tower is due to its proximity to the city and the tendency of night migrants, flying under overcast skies, to be attracted by the illumination from shopping centers, street lights and neon signs, as well as the lights about the towers. This lighted area would lure them to dangerously low altitudes, striking cables and other impediments. In contrast, WSIX tower is located in a suburban area adjoining farm land with no bright lights except those about the tower. WSM tower is taller; WSIX is located on a higher hill, but according to Federal Communication Commission specifications, the over-all heights are the same.

Collections were made from 12 Sept. and terminated 8 Nov. (77 trips personally) with help at various times from Katherine A. Goodpasture, Clara W. Fentress, Mike Bierly and H. E. Parmer.

As usual the nights of heaviest mortality coincided with local cold fronts, northerly winds, overcast, fog or precipitation (one or two of these features or a combination of all). But there were some dates when fog or overcast prevailed here when no casualties or relatively few were found. On more than half of these dates, southerly winds prevailed. Without data from the areas north concerning weather and bird movements, it would be futile to theorize why there were no casualties on the few nights when there was fog and a northerly wind here.

The heaviest mortality occurred on the following nights: 11-12 Sept., 143; 29-30 Sept., 297; 2-3 Oct., 190; 4-5 Oct., about 500 (I worked in rain and many of these were not found until the morning of 6 Oct. when Mrs. Goodpasture found a trail of casualties far from the tower); 14-15 Oct., 141; 18-19 Oct., 179.

Tennesee Warblers headed the casualty list with 488; Bay-breasted Warbler, 194; Magnolia Warbler, 186; Ovenbird 168; Red-eyed Vireo 121; Catbird 88.

Some very interesting records have emerged from these disasters. This autumn, among the 4 Mourning Warblers, none had the dark hood of the adult and one had completely yellow underparts which would have been most difficult to identify correctly in the field. The 3 Orange-crowned Warblers lacked "orange-crowns". A. F. Ganier prepared study skins of each species which were sent to U. S. National Museum where my identifications were verified by Mrs. Roxie Laybourne.

Surprisingly, there were 5 Blackpoll Warblers collected between 12 Sept. and 8 Oct. All were checked with a skin from a previous year, verified by Dr. A. Wetmore.

One Sharp-tailed Sparrow was collected at WSM 30 Sept., the 4th Nashville specimen of this species, which is now in the Ganier collection.

On the night of 14-15 Oct., a White-crowned Sparrow was killed at WSIX tower, the only one of this species found at ceilometers or towers here since the collections began in 1948.

On the credit side, a few of the injured birds were caught, kept in captivity until flight was attained, banded and released. They were fed on a cooked egg mixture, meal worms, insects (especially the black aphids that infest English ivy).

Several new late-departure dates for the Nashville area have accumulated this year: Virginia Rail, 16 Oct.; Whip-poor-will (female), 17 Oct.; Red-eyed Vireo, 26 Oct.; Philadelphia Vireo, 19 Oct.; Warbling Vireo, 15 Oct.; Worm-eating Warbler, 6 Oct.; Yellow-breasted Chat, 16 Oct.; Rose-breasted Grosbeak, 22 Oct.; Sharp-tailed Sparrow, 30 Sept. (latest by 2 days of our 3 fall specimens).

As in previous years, the birds were labeled, dated, packaged and frozen immediately for distribution to several workers for their studies, thus conserving valuable material that would otherwise have gone to waste, and possibly saved some living birds from sacrifice for scientific purposes.

Listed below are the species collected. The first figure indicates WSIX and the second WSM towers. An * preceding a single figure indicates the species was found only at WSM; a single unmarked figure indicates it was from WSIX only.

American Bittern 1; Virginia Rail 1-2; Sora 1-1; Coot 1-1; Mourning Dove *2; Yellow-billed Cuckoo 4-3; Black-billed Cuckoo *1; Whip-poor-will *1; Flicker 1; Yellow-bellied Sapsucker *2; Yellow-bellied Flycatcher *1; Brown Creeper *5; House Wren 2; Winter Wren *1; Long-billed Marsh Wren 1-5; Short-billed Marsh Wren 1-3; Catbird 52-36; Brown Thrasher *1; Wood Thrush 8-6; Hermit Thrush 1; Swainson's Thrush 6-2; Gray-cheeked Thrush 6; Veery 3; Golden-crowned Kinglet 2-3; Ruby-crowned Kinglet 1-7; White-eyed Vireo 4-3; Yellow-throated Vireo 1-4; Solitary Vireo *9; Red-eyed Vireo 20-101; Philadelphia Vireo 12-33; Warbling Vireo 1-1; Black-and-white Warbler 4-22; Worm-eating Warbler *1; Golden-winged Warbler 1-1; Tennessee Warbler 114-374; Orange-crowned Warbler 1-2; Nashville Warbler 5-13; Parula Warbler 1; Magnolia Warbler 86-100; Myrtle Warbler 6-11; Black-throated Green Warbler 19-51; Blackburnian Warbler 6-9; Yellow-throated Warbler 1-1; Chestnut-sided Warbler 20-29; Bay-breasted Warbler 62-132; Blackpoll Warbler 3-2; Palm Warbler 31-45; Ovenbird 51-117; Northern Waterthrush 4-4; Mourning Warbler 1-3; Yellowthroat 25-22; Yellow-breasted Chat 2-8; Hooded Warbler *1; Wilson's Warbler 1; Canada Warbler 1; American Redstart 17-28; Bobolink 3-1; Scarlet Tanager 1-4; Summer Tanager 3-1; Rose-breasted Grosbeak 13-9; Indigo Bunting 13-9; Savannah Sparrow 2; Grasshopper Sparrow *1; Sharp-tailed Sparrow *1; Slate-colored Junco *1; Chipping Sparrow 2; Field Sparrow 1-1; White-crowned Sparrow 1; White-throated Sparrow 5-3; Fox Sparrow *1; Lincoln's Sparrow 2-2; Swamp Sparrow 18-7; Song Sparrow 2-1; Unidentifiable account condition 7-23.

1521 Graybar Lane, Nashville, Tenn. 37215.

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PEREGRINE FALCON SURVEY.—In the June 1964 MIGRANT, page 56, we gave the negative results of a search made in Tennessee of the former eyries of this species and promised further information when available. The two investigators mentioned in the article worked northward from Tennessee to Maine and failed to find a single Peregrine at any of the former eyries investigated. Any reports of the species henceforward will be looked upon with great interest and should be carefully followed thru and put on record.

# OBSERVATIONS ON A CHUCK-WILL'S-WIDOW

### By ALBERT F. GANIER

On 11 July, 1963, a young Chuck-will's-widow *(Caprimulgus carolinensis)* was found in a woods road by Boy Scouts at Camp Morris, 8 miles south of Camden, Tenn., near the Tennessee River. I arrived there the same day to visit my grandson, Mitchell, who was Camp Naturalist, and fed the bird twice daily. The fledgling, which was capable of short flights, was entirely unresponsive to food offerings. It had to be force-fed, by manually opening its beak and dropping the food into its cavernous mouth and throat. A feeding consisted of six crickets (the fisherman's variety) and several earth worms. The bird was fully feathered and the measurement of its folded wing was 7.85 inches. The feather sheaths of the primaries, 1.5 inches in length, were still in place and I judged the bird to be between three, and four weeks old. Unfortunately, its tail had been pulled out at the time of capture.

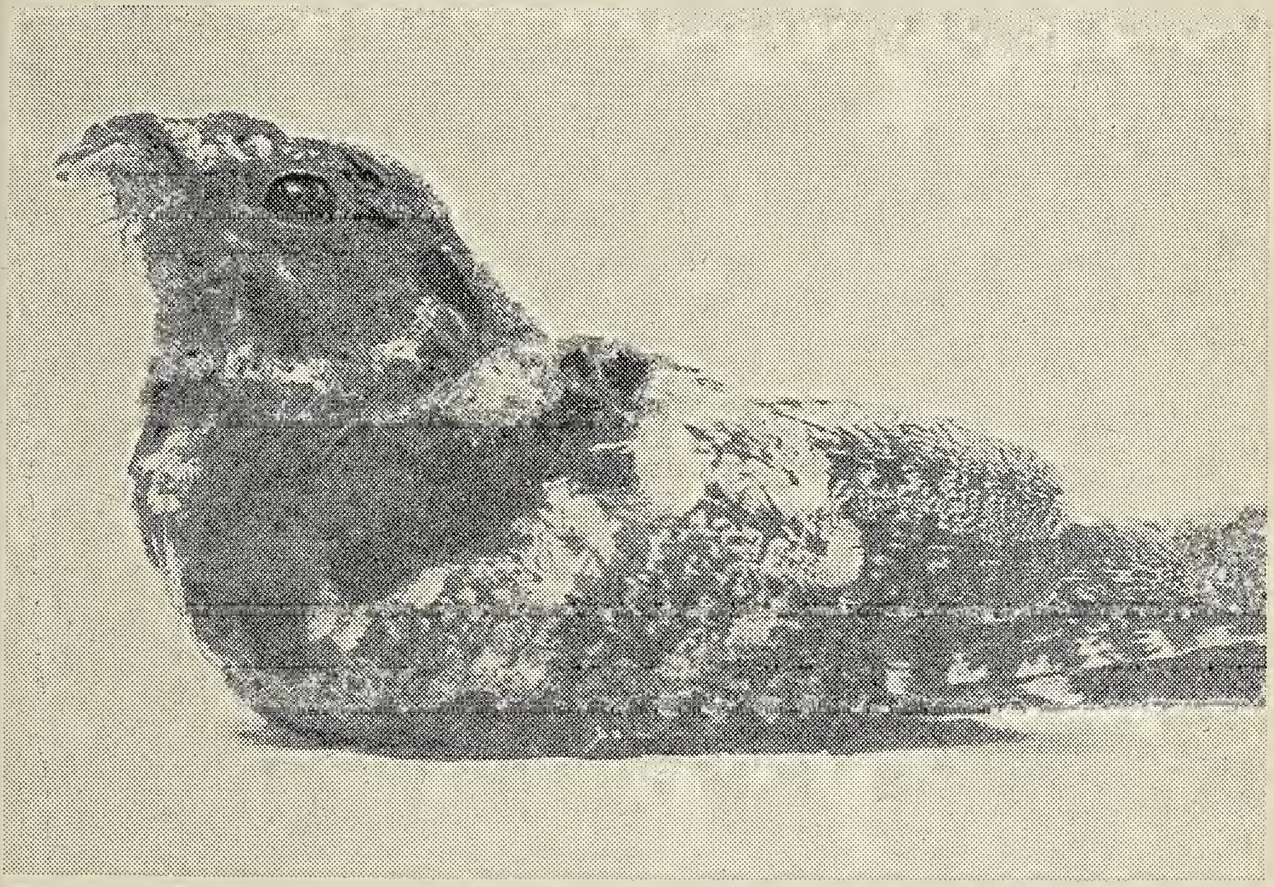
Realizing the possibilities of learning something of interest about this unique species, as a result of observing one in captivity, I decided to take the bird back to Nashville with me and did so on 14 July.

On arrival, I released the youngster in an unoccupied room so that it could practice flight. I visited it there several times a day, disturbing it as little as possible. It was fed twice daily; after breakfast and in late afternoon. A meal consisted of six of the crickets and five half-inch diameter pellets of "Red-heart" dog food, a canned product of putty-like consistency. This diet seemed to keep it healthy and strong and to maintain normal flesh on the breast.

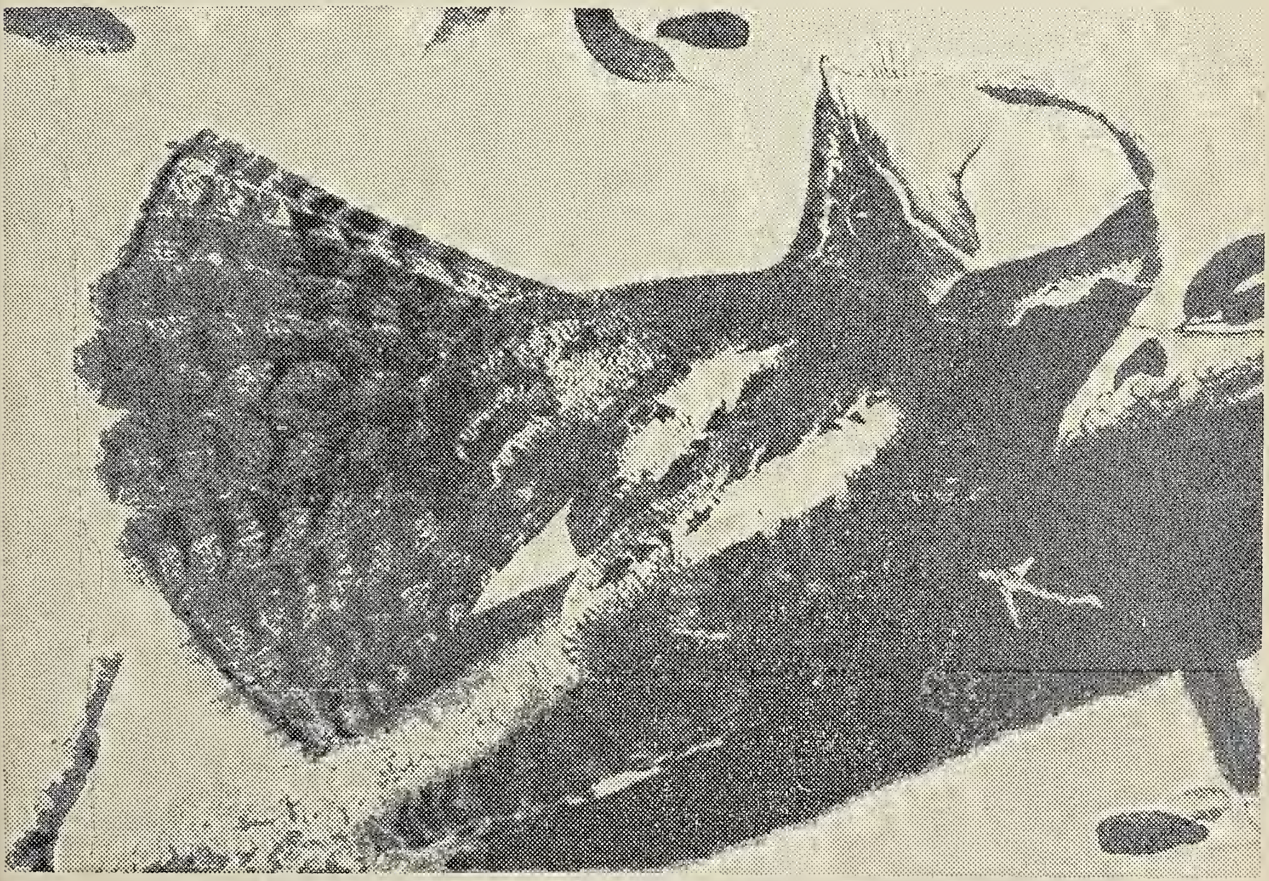
On my entering the room, it would usually fly on my quiet approach and on striking a window or wall would fall to the floor, following which I would pick it up and handle or feed it. In the case of most young captive birds they soon associate their source of food with their keepers and anticipate visitation with enthusiasm. No trace of such response developed however in this young bird; at best, it was a dumb and primitive creature. Its mode of defense indicated that the species still retains traits of its reptilian ancestors. This defense procedure, exhibited against me at first and against strangers throughout when one reached to pick it up, consisted of thrusting its head quickly upward toward the extended hand and, with its large white mouth open, emitting a hissing noise. It would do this repeatedly, especially when cornered. I have witnessed the exact same tactic displayed by Cotton-mouth moccasins, spreading adders, and other snakes. The bird's beak is small, soft and pliable, incapable of striking an effective blow and this game of bluff is its only defense.

Efforts to get the bird to take a live cricket from my fingers were ineffective and this is traceable to the fact that adult birds do not pick up food wih their beaks before swallowing it. Their method of taking food is to "fly it in" as they wing their way through the air with mouth open in pursuit. When visited at dusk, the young captive was found to emit a food call which consisted of a series of single notes, which could be imitated by a low-pitched whistle.

Due to their habit of living on the ground during the daylight hours, or on a fallen branch a few inches above it, nature has equipped them to spring upward quickly and be on the wing before most predators can catch them. This is achieved by the formation of the leg which one can note in handling one of the birds. Ones first impression is that the bird has extremely short legs but this applies only to the tarsus. When the leg is pulled out to its full extent it is found that the thigh bone is so long that the entire leg approximates that of most other birds of the same size. This combination gives it unusual springing capability.



Chuck-will's-widow, 5 weeks old but capable of full flight. Photo by Ganier.



Chuck-will's-widow with mouth open. Photo by Ganier.

While handling this captive, it was noted that the eyes are very large and in the case of this young one appear to be entirely black. They stand out from the side of the head quite prominently as though they were capable of seeing backward as well as forward without a turn of the head. The pupil bulges from the eyeball (and from the side of the head) more than any species of which I know. Attempts to get a red reflection from the eyes of this specimen at night were unsuccessful. This reflectivity, noted in adult birds during their summer sojourn with us, is probably not acquired before maturity.

Ten days after its capture, I took photographs out of doors of the young bird, posing it on a white bath towel background before a previously focused camera. To guard against the bird flying away, I tied a white thread to its leg with a small weight at the other end. To exclude part of the light from its eyes, the bird manipulated its eyelids so that they formed an oval instead of a circle. In a flashlight photograph, taken inside at night by Henry Parmer, the eyes are open to the full extent, the lids making a perfect circle.

The unresponsive and unsociable deportment of this bird is no doubt typical of the species and is attributable to its way of life. By day, when other birds are active, it is asleep in the woods and not until other birds have gone to roost for the night does its period of activity begin. Even at that time, it feeds alone although if the time be mating season it gives its calls frequently and goes through a brief period of courtship. Evidence gathered by the writer and others show that the males do not assist in incubation or even in care of the young, sharing this aloofness with the Wild Turkey and a very few others. In a previous paper (Ganier, 1959) I have discussed the effects upon a species that may be expected as the result of the lack of social stimulus. Such a life of isolation and non-participation have caused this species to remain, in my opinion, the most primitive of all North American birds.

On 24 July, after keeping the young Chuck-will's-widow under observation for thirteen days, it became necessary for me to leave on a trip. Finding that no new tail feathers had begun to appear, making flight erratic, and realizing that it would starve if released, I prepared it as a study skin for my collection. I had no example of this light transition plumage and since I am told that but few exist, perhaps in its present form it will continue to serve for future studies of this strange species.

In a recent issue of **The Wilson Bulletin** (Ganier, 1964), the writer has given considerable further information on the life history of this species but the main purpose of the article mentioned was to refute the oft-quoted story of Audubon; that the birds will carry their eggs away to another site if they are touched by human hands. No supporting evidence whatever was found for this entertaining story. A few seperates of this article are still available from the writer.

2112 Woodlawn Drive, Nashville, Tenn. 27212.

GANIER. ALBERT F. 1959, The degree and effect of sociability among birds. THE MIGRANT, **30:**17-19.

GANIER. ALBERT F. 1964, The alleged transportation of its eggs or young by the Chuck-wills-widow. **The Wilson Bulletin,** 76:19-27.

# WHIP-POOR-WILL NESTS AT BASIN SPRING

Following is a brief account of observations on two nests of Whip-poor-wills at Basin Spring: one in 1962, the other in 1964.

Each nest was located by flushing an adult from a nest with eggs. The two nests were within 15′ of each other 30 or 40′ west and below the 920′ summit of a steep hill. This location is part of the escarpment rising from the Central Basin toward the Highland Rim. The 1962 nest was near but not against a maple seedling about 1½ inches in diameter whose lower twigs overhung but did not shield the nest. The 1964 nest seemed unrelated to any plant, log or rock though green Virginia creeper leaves were on the ground nearby. The high canopy was closed overhead and the general situation was well shaded. Each nest was a shallow depression in the dead leaf floor of deciduous woods. One of them measured 4″ in diameter and about 1″ in depth.

Both nests were found in late April. In 1962 a Whip-poor-will was flushed from 1 egg on 28 April, from 1 egg on 29 April, from 2 eggs 1 May, from 2 eggs 18 May, from 1 egg and 1 chick on 19 May, and from 1 chick about 3″ out of the nest 20 May at which time neither the second egg nor evidence that it had hatched could be found.

In 1964 a female Whip-poor-will was flushed from 2 eggs on 26 April. At 3 PM on 10 May she flushed from 1 egg and 1 chick that appeared recently hatched. At 7 AM the following morning, 11 May, 2 chicks were found. On 12 May when the younger chick was about 24 hours old and the other at least 2 days old, one was obviously larger and more active than the other. One weighed 8.5 grams (Hanson dietetic scales calibrated to 0.5 gr.) and was 2.5″ from bill to tip of the tail. The other weighed 6.0 gr. and was 2.0″ long. When first found the baby Whips were covered with a very soft bright buffy down. They uttered barely audible notes when held close to the ear. Recently hatched chicks could scarcely lift their heads and their eyes were closed; At no time during these observations did baby birds gape or beg for food. Tarsi of two-day-old chicks were too small to hold bands.

In 1962 the incubating and brooding female was disturbed as little as possible. In 1964 early morning and evening observations of the nest were made for several days. While incubating the female would slip quietly off the nest when approached to within about 15′. After both eggs had hatched she remained motionless on the nest until the observer's hand came within a foot of her. She left the nest fluttering with both wings extended as in a crippled-wing display. She frequently made low clucking sounds and once exhibited an abortive act of aggression by flying toward the observer. On one occasion she returned to brood within about 5 minutes. The male was observed only once. At 6:45 PM he appeared and gave low clucking calls. This was during the normal period of Whip-poor-will activity but no feeding was observed.

The Whip-poor-will population is regularly high in the Basin Spring area. There is evidence of their arrival there the last 2 or 3 days of March. The above records indicate eggs may be laid within about 3 weeks of arrival. Unfortunately the 1962 eggs were not marked. The foregoing observations support previous records that eggs are not laid on successive days, that incubation begins before the 2-egg clutch is complete and that eggs hatch at least 24 hours apart. In one nest 1 chick and one egg were found 21 days after the female was flushed from a single egg. This chick appeared to be only recently hatched.

In spite of disturbance and handling of eggs for photography during incubation and the same disturbance after hatching began, the chicks stayed in the nest and were brooded for 48 hours after which one chick was brooded about 10′ from the nest. Both the 1962 and 1964 nests were judged to be successful though the little Whip-poor-wills seemed fragile as they nestled amongst the leaves in the world beyond the nest.

KATHERINE A. GOODPASTURE and LARRY E. DOUGLASS, Vanderbilt Medical School, Nashville.

## THE SEASON

COLUMBIA.—After a cool August, September was rather dry with normal weather during October and several extremely cold spells in November and early December.

**Loons - Duck:** Common Egrets (4) and Canada Geese (40) at AL 3 Oct. All ducks appear to have increased in numbers again this year, and all species commonly found here have been seen this season except the Redhead.

**Hawks - Shorebirds:** Osprey: one 3 Oct. AL. Virginia Rail: at AL 12 Sept. (1). Several Common Snipe, Spotted Sandpiper, Pectoral Sandpiper, Least Sandpiper and Stilt Sandpiper (1) at SP 20 Sept. Semipalmated Sandpiper (1) several Least and Pectoral Sandpipers at AL 27 Sept.

**Vireos - Warblers:** last dates for vireos were: Warbling, 26, Sept., Red-eyed and Philadelphia, 30 Oct. and White-eyed Vireo, 4 Oct. Last warbler dates were: Prothonotary, 27 Sept., Black-and-white, Ovenbird, Yellowthroat and Redstart, 4 Oct. Black-throated Green Warbler, 31 Oct.

**Finches - Sparrows:** Rose-breasted Grosbeak: extremely numerous in area this fall—as many as 40 in flocks several days before last record, 11 Oct. First arival dates for some sparrows were: Swamp, 3 Oct., White-throated and Song Sparrow, 14 Oct.

Abbreviations: AL—Arrow Lake, SP—Sunnyside Pond.

Contributors: GRM—George R. Mayfield, Jr., and DRG—Daniel R. Gray, Jr.

GEORGE R. MAYFIELD, JR., Maury County Hospital, Columbia.

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NASHVILLE.—**Loons - Ducks:** Common Loon: are never numerous here, 17 Nov. (10) RL (MCW) and 18 Nov. (3) SC and (6) RL (LOT) are unusual. Horned Grebe; on 21 Oct. (3) OHL (LOT). Double-crested Cormorant: a rare visitor at OHL 10 Oct. (LOT). Canada Goose: early 26 Sept. (2) TJ (KAG et al.) and BaLa (17) fide (ARL). Flock DRR 4 Oct. (KD, HEP). Snow Goose: two DRR 4 Oct. with flock of Canadas—5 days early. Blue Goose: on 7 Oct. an immature came down in a school yard, was caught by the children and taken to (ARM) for identification and banding—earliest record by 8 days. Black Duck: on OHL 21 Oct. (2) (LOT). Blue-winged Teal: 27 Oct. (3) CL (LOT) and 2 Nov. (1) BL (HEP) unusually late. American Widgeon: BL 5 Oct. (6)—early. Redhead: first SC 18 Nov. (5) (LOT). Ring-necked Duck: the one summering on BL present 8 Oct. when 9 others arrived (MIGRANT: **35**, 61). Canvasback: a female at BL 26 Oct. (HEP)—earliest fall record by one day. Bufflehead: a male on BL 20 Nov. (HEP). Lesser Scaup: were scarce and late arriving at OHL 9 Nov. (1) (LOT) and on BL 18 Nov. (40) (HEP). Ruddy Duck: a female on IC 1 Nov. (HEP). Hooded Merganser: at BL 17 Nov. (8) (HEP) and 18 Nov. (16) and RL (10) (LOT).

**Rails - Shorebirds:** Virginia Rail: caught 1 Oct. on 12th Avenue So. Nashville, taken to (ARM) for identification, banded and released. American Golden Plover: at BL 18 Sept. (1) the only fall record and unusual in about 60% breeding plumage—all other records in winter dress (HEP). Upland Plover: late and rare at BV 22 Oct. (JP). American Woodcock: at TJ 17 Oct. (1) (HEP) and BS 29 Nov. (1) (KAG) are unusual. Common Snipe: first arrival—late at BL 12 Oct. (1) (MCW). Spotted Sandpiper: late at BL 6 Nov. (1) (HEP). Lesser Yellowlegs: at CL 19 Sept. (2) (LOT). Pectoral Sandpiper: at CL 19 Sept. (1) (LOT) and 22 Sept. (2) (MCW). Least Sandpiper: at CL 19 Sept. (4) (LOT). Semipalmated Sandpiper: at CL 22 Sept. (6) (MCW). Red Phalarope: the most outstanding find of the season at BL 24-29 Sept. (1) (HEP).

**Gulls - Flycatchers:** Herring Gull: first at OHL 15 Oct. (1) (LOT). Ring-billed Gull: at OHL 21 Oct. (2)—maximum 21 Nov. (300) (LOT) reduced 12 Dec. (10) (HEP). Bonaparte's Gull: on OHL 21 Nov. (150) (LOT) reduced to 12 Dec. (6) (HEP). Forster's Tern: at BL 23 Sept. (15) (HEP)—8 days latest ever. Whip-poor-will: one was calling at TJ 20 Sept. (KAG) and 25 Sept. (1) heard at F (RC). Common Nighthawk: on 15 Oct. (2) and Chimney Swift: (3) at home of (HCM)—the last of the season. Black-billed Cuckoo: one found as roadside casualty 24 Oct. (KAG)—latest ever by 6 days. Ruby-throated Hummingbird: very late on 30 Oct. (CBM). Acadian Flycatcher: late TJ 20 Sept. (2) banded (KAG). Traill's Flycatcher: on 19 Sept. (KAG) banded her 12th for the season at TJ. Wood Pewee: last at RL 10 Oct. (2) (KAG, MCW).

**Swallows - Waxwings:** Tree Swallow: at AC 26 Sept. (10) (AFG)—only swallows for the season. Hermit Thrush: first 9 Oct. at home of (CWF). Blue-gray Knatcatcher:—late 27 Sept. (1) at home of (ARL). Golden-crowned Kinglet; one banded at TJ 3 Oct. (KAG). Cedar Waxwing:—a flock 8 Nov. (125) (MCW)—unusual for size.

**Vireos - Warblers:** Yellow-throated, Solitary and Philadelphia Vireos —one each banded at TJ 4 Oct. (KAG). Golden-winged and Wilson's Warblers: TJ 3 Oct.—Orange-crowned and Nashville Warblers: 4 Oct. all banded by (KAG). Tennessee Warbler: late 25 Oct. (20) at home of (HEP). Nashville Warbler: 25 Oct. (1) at home of (HEP). Magnolia Warbler: late at BL 3 Nov. (2) (HEP). Blackburnian Warbler: five days late 30 Oct. at home of (HCM). Yellow-breasted Chat: heard at F 26 Sept. (JOE).

**Finches - Sparrows:** Scarlet Tanager: on 11 Oct (ARL) and Summer Tanager: on 16 Oct. (KAG) were later than usual. Dickcissel: one heard 26 Sept. (SB). Purple Finch: first and only one of the season 30 Nov. at home of (JSH). Slate-colored Junco: on 8 Oct. (8) (MCW). White-crowned Sparrow: first 8 Oct. (2) (MCW).

Abbreviations: AC—Ashland City, BS—Basin Springs, BaLa—Battery Lane, BVM—Buena Vista Marsh, BL—Bush Lake, CL—Coleman's Lake, DRR—Duck River Refuge, F—Fernvale, IC—Indian Creek, OHL—Old Hickory Lake, RI—Radnor Lake, SC—Sam's Creek and TJ—Two Jays.

Contributors: SB—Sue Bell, RC—Ruth Castles, KD—Kenneth Dubke, JOE—John O. Ellis, CWF—Clara W. Fentress, AFG—Albert F. Ganier, KAG—Katherine A. Goodpasture, JSH—the John S. Herberts, ARL—Amelia R. Laskey, HCM—Harry C. Monk, ARM—Alan R. Munro, CBM—Mrs. Charles B. Murphy, HEP—Henry E. Parmer, JP—Jimmy Parrish, LOT—Lawrence O. Trabue, MCW—Mary C. Wood.

HENRY E. PARMER, 3800 Richland Ave., Nashville 5, 37205.

COOKEVILLE.—With one exception, the weather since the last report has been about what one would expect. The exception was in August, a wet one. Over six inches of rain fell within 48 hours, this, plus some additional rain, set a record exceeded only once in the past. Light freezes came early but hard freezes came later than usual.

During the last week of November two male Wood Ducks were seen just beyond the northern city limits and at about the same time five were seen near Rickman. Killdeer and Common Snipe (14) have been found on the Tech. Campus where work on a new athletic field has restricted the habitat but this has been partially compensated for by the planting of Kentucky fescue along the drainage ditch west of the field.

Contributors: Caneaal Canella, Roy Hinds and P. L. Hollister.

P. L. HOLLISTER, Tenn. Tech., Cookeville.

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CHATTANOOGA.—Some of the following were recorded in Franklin and Hamilton Counties while others were netted and banded in the Chattanooga Valley (MP) of Georgia, about a mile south of the Tennessee state line, as indicated by code.

**Loons - Ducks:** Common Loon: first 15 Nov. (40), another flock 25 Nov. (47), last 29 Nov. (4). Horned Grebe: first 25 Oct. (5), WHR with very few 29 Nov. (22) HC. Double-crested Cormorant: on 15 and 29 Nov. (1) WHR. High counts for the following at WHR were: Mallard: 29 Nov. (698); Black Duck: 15 Nov. (350); Gadwall: 29 Nov. (185); Pintail: 15 Nov. (65); Green-winged Teal: 26 Nov. (1); American Widgeon: 29 Nov. (75); Redhead: 15 Nov. (65); Ring-necked Duck: 15 Nov. (65); Canvasback: 29 Nov. (98); Lesser Scaup: 15 Nov. (100); Common Goldeneye: 29 Nov. (21); Bufflehead: 29 Nov. (20); Ruddy Duck: 29 Nov. (7); Hooded Merganser: 22 Nov. (34) and Red-breasted Merganser: 15 Nov. (3).

**Rails - Shorebirds:** American Coot: on 15 Nov. (1,000) WHR. Least Sandpiper: on 26 and 28 Nov. (13) SF-CL. Dunlin: on 29 Nov. (2) WHR.

**Cuckoo - Sparrows:** All of the following records were from MP. Yellow-billed Cuckoo: last 25 Oct. Eastern Kingbird: last 25 Oct. Yellow-bellied Flycatcher: on 5 Oct. (2). Least Flycatcher: on 5 Oct. (1). Philadelphia Vireo: on 5 Oct. (2). Nashville Warbler: on 5 Oct. (2). Northern Waterthrush: on 5 Oct. (2) and 12 Oct. (1). Fox Sparrow: banded 20 Nov. (1). Lincoln's Sparrow: banded 18 Oct. (1).

Abbreviations: CL—Chickamauga Lake, HC—Hamilton County, MP—Morse's Pond, SF—Savannah Flats, WHR—Woods Hole Reservoir.

Contributors: Ralph and Carol Bullard, Maxine Crownover, Kenneth Dubke, Roy Evenson.

KENNETH DUBKE, 3302 Navajo Drive, Chattanooga 37411.

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GREENEVILLE.—After a record wet August, eight and two-tenths rain, we had an early freeze the latter part of September. The weather didn't coperate on hawk migration with most of the best days for observation coming early in the season and during the middle of the week rather than on week ends.

**Geese - Hawks:** Canada Geese: on 13 Oct. (13) DCL and again 11 Nov. (10). Mallard: on a small pond near NR 17 Oct. Black Duck: a number 5 Sept. DCL. Teal (sp.): 5 Sept. DCL. Wood Duck: on 1 Sept. (15) in a blue-grass pasture field 300 yards from nearest water and again 9 Sept. (25) in same area and 17 Oct. on a small pond near NR. Ruddy Duck: on 5 Sept.

(2) DCL. Red-tailed Hawk: on 4 Sept. (4) were playing in the breeze. They seemed to be local birds not going anywhere since they were in the same location two days later. Golden Eagle: one immature 6-7 Sept. over BM in western part of Greene County. Osprey: on 5 Sept.

**Sandpipers - Kinglets:** Solitary Sandpiper: on 1 Sept. (1) at a mud hole. Terns (sp.): several 5 Sept. DCL. Yellow-billed Cuckoo: late 12 Oct. Common Nighthawk: migrating 15 Sept. Blue Jay: gathering in flocks of 15 to 25 8 Sept. Golden-crowned Kinglet: first 12 Oct. Ruby-crowned Kinglet: on 17 Oct.

**Warblers - Sparrows:** Warblers: some last dates were: Orange-crowned Warbler: 17 Oct. Nashville Warbler: 5 Oct. Myrtle Warbler: (first) 7 Oct. Blackburnian Warbler: 17 Oct. Palm Warbler: 17 Oct. Ovenbird: 6 Oct. Yellow-breasted Chat: 12 Oct. American Redstart: 23 Sept. Rose-breasted Grosbeak: immatures 3 Oct.

Abbreviations: BM—Bluff Mountain, DCL—David Crocket Lake, NR—Nolichucky River.

Contributors: Mrs. Ben Clark, Mrs. Chester Darnell and Richard Nevius.

RICHARD NEVIUS, Route 3, Greeneville.

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BRISTOL.—It was Indian Summer in our area throughout the fall. Temperatures were never very low. However, the last day of the report period, 30 November, about one-half inch of snow was to be found covering the area during the early morning hours. In spite of this unseasonable weather, some rather interesting observations were made. In general, waterfowl arrived early while some passerine species lingered longer than usual.

**Loon - Ducks:** Common Loon: early 20 Oct. (41). Horned Grebe: first 31 Oct. (1). Pied-billed Grebe: early 1 Sept. (2). Green Heron: last 3 Nov. Common Egret: last 24 Sept. (5). American Bittern: last 20 Oct. (1). Canada Goose: flying over 26 Sept. (3) MFT (JJM). Mallard: first 9 Oct. Black Duck: first 20 Oct. Gadwall: first 3 Nov. (15). American Widgeon: on 9 Oct. (3). Wood Duck: last 7 Oct. Ring-necked Duck: first 31 Oct. Lesser Scaup: first 20 Oct. Bufflehead: first 21 Oct. Hooded Merganser: first 9 Nov.

**Hawks - Shorebirds:** Turkey Vulture: regular until Dec. Black Vulture: on 21 Oct. (1). Cooper's Hawk: on 9 Oct. (1). Bald Eagle: from 10 Sept. to 1 Oct. (1) SHL. Marsh Hawk: on 1 Oct. (1). Osprey: from 1 Sept. to 25 Oct. Sparrow Hawk: increasing since Sept. Spotted Sandpiper: last 11 Sept. (4). Solitary Sandpiper: last 3 Nov. (1). Greater Yellowlegs: last 20 Oct. (1). Lesser Yellowlegs: last 20 Oct. (1).

**Gulls - Shrike:** Ring-billed Gull: first 7 Nov. Caspian Tern: 24 Sept. (15). Black Tern: on 1 Oct. (2) BC (KD). Great Horned Owl: one seen 20 Nov. (2). Yellow-billed Cuckoo: last 22 Sept. Common Nighthawk: last 25 Sept. Chimney Swift: last 7 Oct. Ruby-throated Hummingbird: last 9 Oct. Red-bellied Woodpecker: increasingly common. Red-headed Woodpecker: none since summer. Hairy Woodpecker: on 10 Nov. (1). Wood Pewee: last 6 Oct. Barn Swallow: last 15 Sept. Brown Creeper: first 21 Oct. Winter Wren: first 24 Nov. Long-billed Marsh Wren: 20 Oct. Swainson's Thrush: first 8 Sept. Gray-cheeked Thrush: first 13 Sept. Golden-crowned Kinglet: first 25 Oct. Ruby-crowned Kinglet: first 18 Oct. Cedar Waxwing: first 22 Oct. Northern Shrike: (see details elsewhere in this issue). Loggerhead Shrike: more common since October than in summer.

**Vireos - Sparrows:** White-eyed Vireo: last 8 Sept. Blue-winged Warbler: last 8 Sept. (Banded). Tennessee Warbler: most common migrant, first 8 Sept. Nashville Warbler: first 14 Sept. Magnolia Warbler: first 9 Sept. Cape May Warbler: on 12 and 18 Oct. Myrtle Warbler: first 4 Oct. Black-throated Green Warbler: first 6 Oct. Blackburnian Warbler: first 6 Sept. Bay-breasted Warbler: first 9 Oct. Blackpoll: first 14 Sept. (banded). Palm Warbler: from 29 Sept. to 17 Oct. Ovenbird: last 16 Oct. Northern Waterthrush: first 13 Sept. Yellowthroat: last 17 Oct. Yellow-breasted Chat: last 8 Sept. Wilson's Warbler: from 8 to 14 Sept. (4 banded). Canada Warbler: first 9 Sept. American Redstart: from 8 Sept. to 6 Oct. Bobolinks: flock 13 Sept. (250) HR. Common Grackle: latest 23 Nov. (5,000). Summer Tanager: last 18 Oct. Rose-breasted Grosbeak: on 22 and 29 Sept. Blue Grosbeak: last 17 Oct. Indigo Bunting: last 27 Sept. Savannah Sparrow: on 20 Oct. (6). Vesper Sparrow: last 26 Nov. Chipping Sparrow: last 25 Oct. Swamp Sparrow: on 20 Oct. (4) and 3 Nov. (15).

Abbreviations: BC—Bluff City, HR—Holston River, MFT—Mendota (Va.) Fire Tower, SHL—South Holston Lake.

Contributors: JA—Judith Abbott, WC—Wallace Coffey, KD—Kenneth Dubke, JDE—J. D. Edmundson, HH—Harvey Hawk, TH—Tim Hawk, JJM—Joseph J. Murray, HWN—H. W. Nunley, RQ—Robert Quillen, JR—James Rogers, CS—Charlie Smith, EG—Enno vanGelder and HW—Hank Woodward.

WALLACE COFFEY, 508 Spruce Street, Bristol, Tenn.

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ELIZABETHTON.—The fall and early winter were generally milder than usual. Due to a general lack of rain, the hazard of forest fires presented itself throughout part of the fall. The early winter season was characterized by a lack of most of the typical winter weather. Few prolonged cold spells occurred and precipitation was primarily in the form of rain. No measurable snowfalls were noted.

**Loons - Ducks:** Common Loon: first observation, 7 Nov. (3); 21 Nov. (8) on WiL; greatest numbers, 22 Nov. (11) on BL. Horned Grebe: 7 Nov. (3) and 22 Nov. (4). Pied-billed Grebe: regular since 5 Sept. (1). Green Heron: last observed, 11 Oct. (1). American Bittern: one observation on 11 Oct. (1) at FH (LRH). Mallard: only three records, 15 Oct. (3), 22 Nov. (2), 6 Dec. (1). Black Duck: first record, 11 Oct. (1); maximum numbers, 21 Nov. (40). Gadwall: 2 Nov. (1), 21 Nov. (1), 22 Nov. (6). American Widgeon: first record, 17 Oct. (5); maximum number, 22 Nov. (26). Green-winged and Blue-winged Teal: one each on 17 Sept. and 17 Oct. Wood Duck: throughout Oct. with maximum numbers on 11 Oct. (10). Redhead: only on 17 Oct. (2). Ring-necked Duck: first record, 23 Sept. (4); maximum numbers on 21 Nov. (60) and 7 Dec. (40). Lesser Scaup: 31 Oct. (44), with one present on WiL since spring. Common Goldeneye: maximum number, 22 Nov. (17) on BL, with one present on WiL since spring. Bufflehead: first record, 21 Nov. (12); up to 50 odd wintering on WiL. Hooded Merganser: 22 Nov. (20) on BL. Common Merganser: 19 Nov. (1).

**Hawks - Owls:** Black Vulture: one over PHL on 15 Oct. (Mrs. HD, LRH). Goshawk: one along the Blue Ridge Parkway in Mitchell County, North Carolina on 25 Oct. (RDM, JL). Sharp-shinned Hawk: 12 Sept. (1). Cooper's Hawk: 6 Sept. (1), 11 and 25 Oct. (1). Marsh Hawk: 15 Sept. and 1 Nov. (1). Osprey: 19 Sept. and 7 Oct. (1). Sparrow Hawk: regular; maximum numbers, 10 Nov. (4). Sora Rail: only on 20 Sept. (1). American

Coot: 11 Oct. (2) and 22 Nov. (10). Semipalmated Plover: 8 Sept. (1). Lesser Yellowlegs: 5 Sept. (1) at FH. Pectoral Sandpiper: one on 15 and 25 Sept. Least Sandpiper: 4 and 5 Sept. (4), 8 Sept. (6), 15 Sept. (2). Stilt Sandpiper: one on 8 Sept. at RC (KHD). Herring Gull: 6 Dec. (6) on BL (LRH et al.). Ring-billed Gull: first record, 11 Oct. (1); greatest number, 6 Dec. (23). Common Tern: 5 Sept. (3) on BL (KHD, WC, CRS). Caspian Tern: 5 Sept. (130) on BL (KHD, WC, CRS). Great Horned Owl: 11 Oct., 18 Oct., 10 Nov. and 16 Dec. (1). Barred Owl: one on 7 Sept. (RDM).

**Nighthawk - Vireos:** Nighthawk: maximum number, 12 Sept. (30); last record, 2 Oct. (1). Chimney Swift: last record, 7 Oct. (6). Ruby-throated Hummingbird: last record, 8 Oct. (1). Red-headed Woodpecker: 11 Oct. (1) (HD). Yellow-bellied Sapsucker: first record, 27 Sept. (1). Tree Swallow: 20 Sept. (8). Bank Swallow: 15 Sept. (1). Barn Swallow: last record, 11 Oct. (1). Bewick's Wren: one on HM on 6 Sept. (FWB). Catbird: last record, 23 Oct. (1). Hermit Thrush: one record, 15 Dec. (1) (CRS). Swainson's Thrush: regular through the fall; last record, 15 Oct. (1). Gray-cheeked Thrush: 6 Sept. and 12 Sept. (1).

**Warblers - Finches:** Orange-crowned Warbler: 10 Oct. (2, banded). Nashville Warbler: 5 Oct. (1, banded). Myrtle Warbler: first record, 11 Oct. (6). Rusty Blackbird: 18 Oct. (6) in SV. Purple Finch: no fall or early winter records. Red Crossbill: 25 Oct. (4), 1 Nov. (8), 13 Dec. (1). Grasshopper Sparrow: last record, 11 Oct. (1). White-crowned Sparrow: first record, 11 Oct. (1). White-throated Sparrow: first record, 4 Oct. (1). Fox Sparrow: first record, 23 Oct. (1). Lincoln's Sparrow: banded on 17 Oct., 23 Oct., 1 Nov (1). Swamp Sparrow: first record, 4 Oct. (1). Addendum: It has been brought to my attention that a summer record of the Common Snipe failed to be included in the last Season Report. One bird was observed near MC on 13 June (CRS).

Abbreviations: BL—Boone Lake, FH—Fish Hatchery, HM—Hump Mountain, MC—Milligan College, PHL—Patrick Henry Lake, RC—Roan Creek, SV—Shady Valley, WiL—Wilbur Lake.

Contributors: FWB—Fred W. Behrend, WC—Wallace Coffey, HD—Mrs. Harold Dillenbeck, KHD—Kenneth H. Dubke, LRH—Lee R. Herndon, JL—John Luker, RDM—Roby D. May, CS—Charles R. Smith.

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AN OLD GOSHAWK RECORD.—A Round Table Note by Arthur Stupka concerning a Goshawk shot near the Great Smoky Mountains National Park (MIGRANT, **34**:91) includes a list of previous Goshawk records from Tennessee (with the exception of the recent record near McEwen, Tennessee in MIGRANT, **34**:40). To this list I would like to add an old record from Hawkins County, Tennessee in 1907. Included in a short paper by J. H. Fleming in The Wilson Bulletin, vol 14 : 154-157, is the following Goshawk record: "I saw one on April 5, with the ashy breast of the fully adult bird, . . ." Fleming's observations were made in the vicinity of Surgoinsville on the Holston River during parts of March and April, 1907. This record would appear to be the latest spring record for Tennessee.

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# THE 1964 CHRISTMAS SEASON BIRD COUNTS

**By TOS Members and Guests**

The thirty-fifth annual Christmas Season Bird Count tabulated in the following pages lists 119 species and subspecies. This number has been exceeded only in 1954, 1955 and 1960 in which 122 species were recorded for each of the three years. Fourteen counts are tabulated while two counts, for high altitudes only, are presented in paragraph form due to lack of space in the table. Oregon Junco occurs on the list for the first time making a total of 166 species and subspecies recorded since the first census published in THE MIGRANT in 1930. Northern finches were notably scarce this season and numbers of many species were lower than usual.

## INFORMATION ON THE COUNTS

Information on the counts and the species list with corresponding numbers of individuals in the table, are given progressively from west to east. Locations for which the species and numbers are not tabulated are indicated under the appropriate location under Information on the Count.

MEMPHIS.—Roughly 1953 areas; wooded bottomlands 30%, deciduous woods and city parks and cemeteries 28%, pastures, bare fields 15% suburban roadsides 25%, river edge 2%. 27 Dec.; 7 a. m. to 5 p. m.; temp. 28° to 34°; wind N, 5-12 m.p.h.; 21 observers in 7 parties. Total party-hours, 75 (55 on foot, 20 by car); total party-miles, 173 (53 on foot, 120 by car). Mr. and Mrs. Ben B. Coffey, Jr. (compilers), Fred T. Carney, Mary Davant, Mr. and Mrs. Henry Dinkelspiel, John H. Embury, Earl Fuller, Edward M. King, Mr. and Mrs. Franklin McCamey, Jr., Robert S. McGowan, Charles McPherson, Mrs. J. H. McWhorter, Mrs. Paul C. Owen, Mrs. Charles Seahorn, Alice Smith, Dr. and Mrs. Arlo I. Smith, Lynn Smith, Mrs. M. L. Torti, Wendell L. Whittemore, Mr. and Mrs. Chas. E. Wilmeth.

REELFOOT LAKE.—All points within 15-mile diameter circle, center Reelfoot Lake: lake 20%, marsh 5%, deciduous woods 45%, field and farm 18%, roadside 12%. 2 Jan., 1965, 7:00 a. m. to 4:00 p. m., overcast; temperature 44° to 60°; wind S shift to N, 0-22 m.p.h.; 5 observers in 3 parties. Total party-hours 24 (4 on foot, 17 by car, 4 by boat); total party-miles 164 (4 on foot, 151 by car, 9 by boat). Total, 78 species (1 additional race); 480,927 individuals. John L. DeLime, Edwin Larson, Jr., Keith Pardue, Steve Pardue and Clell T. Peterson. Compiler—John R. Conder.

DYERSBURG.—Center of circle in Dyersburg; mostly by car and boat, with very little walking. 28 Dec.; 9:00 a. m. to 12:15 p. m.; cloudy, temperature 40° to 55°. Four observers: Jim Ganier, Dayton Keller, Virginia Lamb (compiler), and Mike Underhill. The area included Lake Lauderdale (750) acres which looks very much like Reelfoot Lake except that it does not have as much deep water.

COLUMBIA.—Center of area one mile west of Zion Church as in past years. Some new large phosphate washing lakes held a good variety of ducks. 27 Dec.; overcast; wind, W 5 m.p.h.; temperature 38° to 50°; seven observers in 4 parties. Observation was in progress from early morning until after dark and included a float trip down Duck River. The Harris' Sparrow returned to the same area with a group of White-crowned Sparrows as seen two years ago on Christmas count and observed through the winter. So far this season, observed only on the Christmas count. An Oldsquaw was seen on Montezuma Pond with a group of Redheads and Ring-necked Ducks during the period but not on count day. Mary Lucy and William Fuqua, Dan Gray, George (compiler) and Cleo Mayfield and David and Paul Patterson.

NASHVILLE.—Approximately the same area as the past 14 years: the area of a 15 mile diameter circle, centered on Belle Meade Mansion. Included were Radnor and Bush lakes, deciduous wooded hills, 40%; open fields and pastures, 25%; river bottom fields, 20%; roadsides and suburban yards, including 18 feeding stations, 15%. 26 Dec. 1964, 6:00 a. m. to 6:00 p. m. Temp. from 56 down to 35 degrees. Sky overcast, some light rain. 35 field observers in 9 parties, plus 20 at feeding stations and yards. Party-hours 105 (56 on foot, 49 by car), plus 36 watching feeders. Party-miles 236 (41 on foot, 195 by car). Total 71 species and 12,879 individuals of which only 5,000 were Starlings. The water birds were mainly at Radnor and Bush, the Brewer's Blackbirds were in Bell's Bend by Albert Ganier, the single Grackle was at home by Mrs. Don Cassel, and the Tree Sparrows were in Buena Vista marsh by John Ogden and Fairman Cumming. Field observers were: Mr. and Mrs. Clyde Anderson, Sue Bell, Mike Bierly, Mary Rose Bradford, Ruth Castles, Mrs. H. P. McClanahan, Portia Ward Clark, Anella Creech, Fairman Cumming, Milbry Dugger, Mr. and Mrs. John Ellis, Erline Elmore, Charles Farrell, Albert F. Ganier, Katherine A. Goodpasture, Paul Greene, Ben Grose, Mr. and Mrs. John S. Herbert, Louise Jackson, Mrs. Chas. B. Murphy, John C. Ogden, Henry E. Parmer (compiler), Jimmy Parrish, Mrs. Wm. Puryear, Jennie Riggs, Ellen Stringer, Larry and Lawrence Trabue, Mary Wood. Our home area observers were: O. C. Ault, Helen Bell, Bernard E. Britt, Jr., Mrs. Don Cassel, Mrs. Watkins Crockett, Clara W. Fentress, Mrs. E. A. Bergstrom, Mary Frazer, Carol Knauth, Mrs. K. B. Everly, Dr. and Mrs. Hugh Fry, Mrs. Ben Grose, Mrs. Hal R. Swann, Bill Puryear, Mr. and Mrs. Max Schuerman, Kirby Stringer.

LEBANON.—As in past years Lebanon was the center of the seven and one-half mile radius circle. The area included Lock V and a portion of the Cumberland River. Except for the water birds most of the observations were made near the homes of participants. 2 Jan., a very warm day with the temperature mostly in the 50s. John Drennen made the count of water birds. Mrs. Roy K. Hobbs (compiler).

COOKEVILLE.—Territory covered was approximately that of the past six counts except only two lakes, instead of three, were included in the area. 21 Dec.; cloudy, temperature 35° to 37°; winds, light and variable. Habitat changes since last year include, reduced woodland, drained moist areas followed by reseeding, reduced corn acreage but increased pastures and cover crops. Beulah Clark, Dr. and Mrs. J. O. Cummins, Caprice Haile, Roy Hinds, P. L. Hollister (compiler), Dr. and Mrs. Sidney McGee, Dr. and Mrs. Tom Moore, Miser Richmond, Francis R. and Robert Toline and Marie White.

CHATTANOOGA.—All points within a 15-mile diameter circle, center National Cemetery; fields and pastures 35%, woodlands 20%, ponds and lakes 15%, creeks and rivers 15%, roadside 10% and residential 5%. 27 Dec.; 7:00 a. m. to 5:00 p. m., clear; temperature 42° to 65°; wind SW, 6 m.p.h. Twelve observer in 6 parties. Total party-hours, 42 (26 on foot, 16 by car); total party-miles, 186 (31 on foot, 155 by car). Mr. and Mrs. T. Stanley Barr, Benton Basham, Ralph T. (compiler) and Mrs. Bullard, Jr., Maxine Crownover, Roy Evenson, Howard Meadors, Mr. and Mrs. Eugene Ranger, Mr. and Mrs. Eugene M. West.

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KNOXVILLE.—(Same area as previous year; weedy fields, hedgerows and roadsides 44%, mixed deciduous and pine woods 24%, residential areas and city parks 12%, pastures and cultivated fields 10%, stream and lake edge 10%). 27 Dec.; 7 a. m. to 8 p. m. Overcast with occasional light rain; temp. 38° to 42°; wind N, 0-6 m.p.h.; no snow or ice. Eleven observers in 7 parties. Total party-hours 62 (50 on foot, 12 by car); total party-miles 243 (50 on foot, 193 by car). Total, 66 species, about 6,043 individuals. James Campbell, John Elson, Mary Enloe, H. C. Garlinghouse, David Highbaugh, Beth Lacy, Paul Pardue, Kenneth Sanders, Maxie Swindell, James Tanner (compiler), George Wood.

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GREAT SMOKY MOUNTAINS NATIONAL PARK, Tenn. - N. Car.—Localities are within a 15-mile diameter circle centered on Bull Head of Mt. Le Conte—same general area as in 1937-1956 and 1962 to date. 3 Jan.; 7:00 a. m. to 5:00 p. m. Partly cloudy - overcast; temperature range 18° to 40°; wind variable, 5 - 30 m.p.h.; high altitude trees ice-covered. Thirty-six observers in 10 parties. Total party-hours, 80 (75 on foot, 5 by car); total party-miles, 135 (52 on foot, 83 by car). Mrs. Thos. Arp, Ross Bender, Carson Brewer, Kit Brewer, Vivien Brown, James Campbell, Donald DeFoe (compiler), Ray Ellis, John Elson, Mary Enloe, Lloyd Foster, Mr. and Mrs. H. C. Garlinghouse, David Highbaugh, Joseph Howell, Susan Hoyle, Beth Lacy, Laura Lacy, Helen Lewis, Mrs. Max Miller, Mr. and Mrs. Robert Monroe, Julia Moore, Louise Nunnally, Ricky Nunnally, Holly Overton, Paul Pardue, Edward Smith, Arthur Stupka, Mr. and Mrs. T. C. Swindell, James Tanner, Mr. and Mrs. W. B. Williams, Mr. and Mrs. G. R. Wood. (Tennessee Ornithological Society, National Park Service and guests.)

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GREENEVILLE.—All points within a 15 mile diameter circle, center three miles west of Greeneville on highway 11-E, to include Lick Creek, Roaring Fork, Bluff Mountain, Davy Crockett Lake, Nolichuckey River, Albany, Tusculum, and Greeneville; woodland 50% (deciduous with small patches of pines and cedars), open fields and pastures 40% (includes ponds and lakes), town 10%. 1 Jan.; 8:00 a. m. to 5:00 p. m.; intermittent rain; temp. 45°; practically no wind. 13 observers in nine parties. Total party-hours, 20 (8 on foot, 12 by car); total party-miles, 33 (7 on foot, 26 by car). Because of a rabies epidemic in Greene County during the count period, very little time was spent on foot away from houses or automobiles. Most observation was done from roads. Seen in the area during count period but not on count day: Great Blue Heron, Turkey Vulture, Black Vulture, Sparrow Hawk, Marsh Hawk, Rough-legged Hawk, Barn Owl (heard), Red-winged Blackbird, and the Egyptian Goose. Tom Boles, Dr. and Mrs. Turner Clinard, Mrs. Ben Clark, Mrs. Nat Coleman, Mr. and Mrs. Chester

Darnell, Mrs. Marion Edens, Mrs. Richard Nevius, Richard Nevius (compiler), Dale Park, William Rawls.

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BIG BALD MOUNTAIN, Tenn. - N. C.—(All points within a 15-mile diameter circle, center head of East Fork Higgins Creek, to summit of Big Bald Mt. in Unicoi and Yancey counties (3,500-5,516 ft.); deciduous woodland 70%, grassy treeless area on top of Big Bald 30%). 23 Dec.; 7:30 a. m. to 5:45 p. m. Cloudy to partly cloudy; temp. 36° to 49°; wind SW, 3-20 m.p.h.; very light trace of snow or frost on ground. Two observers in one party. Total party-hours, 10 (all on foot); total party-miles, 8 (all on foot). Grouse, 3; Pileated Woodpecker, 1; Hairy Woodpecker, 1; Raven, 3; White-breasted Nuthatch, 2; Winter Wren, 1; Robin, 1; Cardinal, 1; Junco, 7. Total, 9 species; 18 individuals. Charles Smith, Fred Behrend (compiler).

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KINGSPORT.—Usual area centered on Pactolus and including Kingsport, the Holston River, Patrick Henry Lake and most of Boone Lake, parts of Bays Mt. and River Mt., including the Bays Mt. Reservoir and River Mt. Fire Tower. 26 Dec., 8:30 a. m. to 5:30 p. m. The weather was mild, 54 to 63 deg. F., 0.17 in. rain. The sky was generally overcast, with mild rain now and then, a few claps of thunder, and some sunshine. Spring Peepers and Yellow Jackets were encountered on Bays Mt. as well as other parts of the area. There were 16 observers in 13 parties, a total of 50 party-hours: (on foot 33, automobile 10, canoe 5, motorboat 2). From the River Mt. Fire Tower, 1,500 unidentified ducks and ducklike birds were counted, 1,250 ft. below on the water and shores of a stretch of river that was closed to hunting this year. Arthur Smith had Purple Finches in his yard on Christmas Day but not on census day. Participants: Roy Allen, Charles Baker, Charlotte, Dan, James, John, and Thomas Finucane (compiler), Ed Gift, Mrs. Fred Kays, Frank Oglesby, Mrs. Virgil Peck, George Rodgers, Mrs. Lucille Smith, Mrs. R. M. Switzer, R. M. Switzer, Jr., and Howard Young.

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BRISTOL, Tenn. - Va.—All points within a 15-mile diameter circle, center at junction of U.S. 11 and Va. 625, to include Bristol, Stone Mill Marsh, South Holston Lake and River; fields and farmland 40%, mixed deciduous forest 25%, lake and river 15%, town and residence 10%, Misc. 10%. 26 Dec. 6:45 a. m. to 6:00 p. m. Cloudy with intermittent showers; temperature 35° to 50°; wind W, 2-10 m.p.h.; mild weather for the time of year. Eight observers in 3 parties. Total party-hours, 27 (17 on foot, 10 by car); total party-miles, 220 (8 on foot, 212 by car). Judith Abbott, Fletcher Bingham (co-compiler), Wallace Coffey (co-compiler), Robert Quillen, Charles R. Smith, Enno van Gelder, Roger van Gelder, Henry Woodward.

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ELIZABETHTON.—(Same as previous years; lake borders 5%, stream borders 50%, woodlands 30% and weed fields 15%). 3 Jan.; 6:30 a. m. to 6:00 p. m., clear to partly cloudy; temp. 31° to 40°; wind SW, 5-25 m.p.h.; ground clear and all water open. Seven observers in 5 parties. Total party-hours, 34 (22 on foot, 12 by car); total party-miles, 126 (22 on foot, 104 by car). Total, 51 species; 2,516 individuals. Fred W. Behrend, J. C. Browning, Mrs. Harold Dillenbeck, Lee R. (compiler) and Lois M. Herndon, Roby D. May, Jr., and Charles R. Smith.

## THE 1964 CHRISTMAS SEASON BIRD COUNTS

| | Memphis | Reelfoot | Dyersburg | Columbia | Nashville | Lebanon | Cookeville | Chattanooga | Knoxville | Smokies | Greeneville | Kingsport | Bristol | Elizabethton |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Common Loon | | | | | | | | | | | | | 1 | |
| Horned Grebe | | | | | | | | 4 | | | | | 11 | 1 |
| Pied-billed Grebe | 2 | 2 | | 3 | 2 | | | | | | | 7 | 1 | |
| Dbl.-cr. Cormorant | | 7 | | | | | | | | | | | | |
| Great Blue Heron | | 12 | | 5 | 2 | 25 | | | 9 | | | 4 | 3 | |
| Common Egret | | 1 | | | | | | | | | | | | |
| Canada Goose | | 28,300 | | | | 1 | | | | | 13 | 1 | | |
| Hutchins Goose | | 175 | | | | | | | | | | | | |
| Snow Goose | | 6 | | | | | | | | | 1 | | | |
| Blue Goose | | 1 | | | | | | | | | | | | |
| Mallard | 25 | 78,000 | 85,000 | 53 | 20 | 10,000 | | 79 | 9 | | 17 | | | |
| Black Duck | | 875 | 5,000 | 10 | 15 | 3,500 | | 293 | 1 | | | | 1 | 3 |
| Gadwall | | 4,200 | | | 27 | 60 | | | 21 | | | | | |
| Pintail | | 950 | 5,000 | | | 150 | | | | | | 2 | | |
| Green-wng. Teal | | 375 | 500 | | | 50 | | 1 | | | | | | |
| Blue-wng. Teal | | | | | | | | | | | | 20 | | |
| Am. Widgeon | | 2,100 | 250 | 4 | | 300 | | | 1 | | | 11 | | |
| Shoveler | | 450 | | | | 20 | | | | | | | | |
| Wood Duck | | 3,100 | 1,000 | 2 | | 110 | | | | | | | | |
| Redhead | | 14 | | 5 | | | | 1 | | | | 1 | | |
| Ring-neck Duck | | 4,200 | | 10 | 7 | 400 | | | | | | | | 47 |
| Canvasback | | 65 | 300 | 11 | 60 | | | | | | | 5 | | |
| Lesser Scaup | | 70 | | 18 | 152 | 150 | 8 | 27 | | | | 5 | 11 | 3 |
| Common Goldeneye | | 35 | 3,000 | | 4 | | | | 1 | | | | 33 | 1 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bufflehead | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 12 | ...... | 56 |
| Ruddy Duck | ...... | 3 | ...... | 2 | 4 | ...... | ...... | ...... | ...... | ...... | ...... | 5 | ...... | ...... |
| Hooded Merganser | ...... | 6 | ...... | 2 | 1 | ...... | ...... | 19 | ...... | ...... | ...... | ...... | ...... | 1 |
| Common Merganser | ...... | 3 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Turkey Vulture | ...... | 2 | 5 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Black Vulture | ...... | 2 | ...... | 25 | 11 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Sharp-sh. Hawk | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... |
| Cooper's Hawk | ...... | ...... | ...... | ...... | 1 | 1 | ...... | ...... | 1 | 1 | ...... | ...... | ...... | ...... |
| Red-tailed Hawk | 28 | 9 | 9 | 6 | 16 | 2 | ...... | 2 | 2 | 3 | 1 | ...... | ...... | ...... |
| Red-shouldered Hawk | ...... | 3 | ...... | 1 | 2 | ...... | ...... | 2 | 1 | 1 | ...... | ...... | ...... | ...... |
| Golden Eagle | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Bald Eagle | ...... | 36 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Marsh Hawk | 4 | 6 | 3 | 3 | 2 | 7 | 1 | 3 | 1 | ...... | ...... | ...... | ...... | ...... |
| Peregrine Falcon | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Sparrow Hawk | 5 | 14 | 4 | 4 | 36 | 3 | 5 | 2 | 3 | 5 | ...... | ...... | 5 | 6 |
| Ruffed Grouse | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 3 | ...... | ...... | ...... | ...... |
| Bobwhite | 167 | ...... | ...... | 11 | 15 | 15 | 14 | 32 | 45 | 15 | ...... | 23 | ...... | 27 |
| Turkey | 11 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Am. Coot | 2 | 17,000 | ...... | 400 | 38 | 55 | ...... | 4 | ...... | ...... | ...... | 130 | ...... | ...... |
| Killdeer | 7 | 3 | 2 | 11 | 20 | ...... | 3 | 28 | 10 | 60 | ...... | 7 | ...... | 20 |
| Am. Woodcock | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 3 | ...... | ...... | ...... | ...... |
| Com. Snipe | 1 | 2 | ...... | 3 | 2 | ...... | 14 | 40 | 11 | 1 | ...... | ...... | 2 | 2 |
| Herring Gull | ...... | ...... | ...... | 1 | 2 | ...... | ...... | ...... | 4 | ...... | ...... | 1 | ...... | ...... |
| Ring-billed Gull | ...... | 14 | ...... | ...... | 8 | ...... | ...... | 12 | 115 | ...... | ...... | 2 | 92 | ...... |
| Mourning Dove | 71 | 67 | 5 | 160 | 129 | 19 | 47 | 206 | 176 | 147 | 102 | 32 | 103 | 15 |
| Barn Owl | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Screech Owl | ...... | ...... | ...... | 1 | 3 | 1 | ...... | ...... | ...... | ...... | 1 | 2 | ...... | ...... |
| Great Horned Owl | ...... | 1 | 1 | 1 | ...... | ...... | ...... | 1 | ...... | ...... | 1 | ...... | ...... | ...... |
| Barred Owl | 1 | ...... | ...... | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Belted Kingfisher | 2 | 3 | ...... | 5 | 16 | ...... | ...... | 6 | 8 | 11 | 1 | 4 | 8 | 8 |
| Yel.-sh. Flicker | 164 | 36 | 27 | 35 | 75 | 12 | 16 | 19 | 16 | 4 | 5 | 9 | 4 | 7 |
| Pileated Woodpecker | 8 | 9 | 2 | 9 | 22 | ...... | 5 | 3 | 6 | 16 | 4 | 7 | 10 | 4 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Red-bel. Woodpecker | 79 | 27 | 9 | 32 | 67 | 3 | 16 | 16 | 10 | 6 | 11 | 6 | 6 | 1 |
| Red-head. Woodpecker | 9 | 4 | 1 | ...... | 1 | ...... | 5 | 2 | ...... | ...... | ...... | 3 | ...... | ...... |
| Yel.-bel. Sapsucker | 54 | 6 | 2 | 21 | 21 | 5 | 7 | 10 | 5 | 9 | 2 | 2 | ...... | 3 |
| Hairy Woodpecker | 20 | 2 | 1 | 3 | 15 | 6 | 6 | 4 | 4 | 7 | ...... | 4 | 2 | 1 |
| Downy Woodpecker | 64 | 24 | 5 | 23 | 99 | 7 | 29 | 33 | 40 | 44 | 20 | 19 | 15 | 17 |
| E. Phoebe | ...... | ...... | ...... | 2 | ...... | ...... | 2 | 1 | 1 | 7 | ...... | 1 | ...... | ...... |
| Horned Lark | 412 | 32 | ...... | 24 | 81 | 25 | 13 | ...... | 3 | ...... | 10 | 6 | ...... | ...... |
| Blue Jay | 482 | 24 | 26 | 28 | 115 | 21 | 36 | 104 | 71 | 12 | 19 | 54 | 23 | 10 |
| Common Raven | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... |
| Common Crow | 39 | 1,300 | 50 | 80 | 700 | 2,020 | 13 | 256 | 171 | 251 | 53 | 100 | 132 | 286 |
| Blk.-cap Chickadee | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | } 174 | ...... | ...... | ...... | ...... |
| Carolina Chickadee | 186 | 51 | 15 | 75 | 298 | 38 | 19 | 109 | 67 | | 44 | 83 | 60 | 61 |
| Tufted Titmouse | 67 | 26 | 10 | 52 | 246 | 26 | 57 | 126 | 59 | 140 | 58 | 77 | 43 | 45 |
| Wht.-br. Nuthatch | ...... | 5 | ...... | 5 | 9 | ...... | 4 | 19 | 1 | 15 | 2 | 9 | 3 | 2 |
| Red-br. Nuthatch | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | 8 | ...... | ...... | ...... | ...... |
| Brown Creeper | 4 | 2 | ...... | 2 | 2 | ...... | 1 | 1 | 9 | 12 | 2 | 5 | ...... | 1 |
| House Wren | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Winter Wren | 15 | ...... | ...... | ...... | ...... | ...... | ...... | 2 | 2 | 6 | 1 | 9 | ...... | 3 |
| Bewick's Wren | ...... | ...... | ...... | 1 | 5 | 1 | 3 | ...... | 1 | 1 | 2 | ...... | 2 | ...... |
| Carolina Wren | 66 | 11 | 2 | 9 | 54 | 1 | 14 | 23 | 85 | 53 | 16 | 35 | 18 | 23 |
| Mockingbird | 130 | 8 | 37 | 10 | 158 | 7 | 13 | 99 | 125 | 52 | 33 | 30 | 57 | 20 |
| Brown Thrasher | 31 | ...... | 1 | ...... | ...... | ...... | 7 | 2 | 3 | 1 | 1 | 2 | ...... | ...... |
| Robin | 622 | 4 | 16 | 60 | 1,500 | 77 | 26 | 61 | 81 | 84 | 3 | 3 | 27 | 28 |
| Hermit Thrush | 15 | 1 | ...... | ...... | 2 | ...... | ...... | 3 | ...... | 9 | ...... | ...... | ...... | ...... |
| E. Bluebird | 2 | 12 | 8 | 12 | 80 | 12 | 39 | 70 | 12 | 46 | 2 | 20 | 2 | 14 |
| Go.-cr. Kinglet | 10 | 1 | ...... | ...... | ...... | ...... | ...... | 6 | 5 | 42 | ...... | 12 | ...... | 1 |
| Ruby-cr. Kinglet | 27 | 8 | 1 | 2 | 2 | ...... | ...... | 2 | 1 | 12 | 1 | ...... | ...... | 1 |
| Water Pipit | 6 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Cedar Waxwing | 74 | ...... | 30 | 30 | 59 | ...... | 146 | 114 | 7 | 3 | ...... | ...... | ...... | 4 |
| Log.-hd. Shrike | 14 | 13 | 10 | 4 | 14 | ...... | 2 | 4 | 11 | 18 | 7 | ...... | 4 | 3 |
| Starling | 90,000 | 45,000 | 200 | 10,000 | 5,000 | 100,250 | 250 | 1,736 | 2,622 | 612 | 710 | 375 | 1,870 | 700 |
| Orange-cr. Warbler | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |

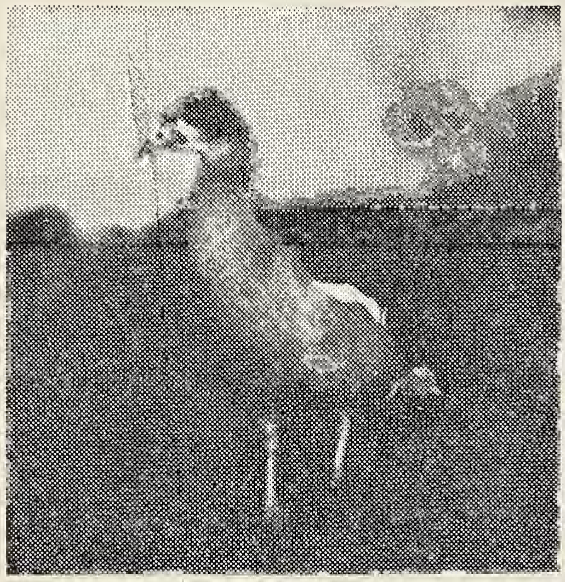
| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Myrtle Warbler | 74 | ...... | ...... | ...... | 60 | 50 | 12 | 1 | 7 | 6 | 2 | 7 | 2 | 11 |
| Pine Warbler | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| Palm Warbler | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... |
| House Sparrow | 390 | 1,000 | ...... | 200 | 440 | 83 | 78 | 165 | 261 | 173 | 154 | 260 | 142 | 300 |
| E. Meadowlark | 180 | 43 | 80 | 40 | 341 | 26 | 60 | 265 | 80 | 102 | 11 | 31 | 59 | 91 |
| W. Meadowlark | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Redw. Blackbird | 70,000 | 200,000 | 400 | 2,100 | 230 | ...... | ...... | 55 | 120 | 4 | ...... | ...... | ...... | 1 |
| Rusty Blackbird | 9 | ...... | ...... | 340 | 50 | ...... | ...... | 5 | 20 | 1 | ...... | ...... | ...... | ...... |
| Brewer's Blackbird | ...... | ...... | ...... | 2 | 4 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Com. Grackle | 120,000 | 75,000 | 30 | 7,000 | 1 | 30 | 80 | 9 | 354 | ...... | 2,052 | 2 | 35 | 2 |
| Br.-head. Cowbird | 20,000 | 17,000 | 1 | 1,200 | ...... | 15 | ...... | 32 | 10 | ...... | ...... | ...... | ...... | ...... |
| Cardinal | 515 | 89 | 51 | 125 | 492 | 21 | 72 | 127 | 369 | 221 | 88 | 93 | 105 | 111 |
| Purple Finch | 87 | ...... | ...... | 10 | 15 | ...... | ...... | 4 | 5 | ...... | 2 | ...... | ...... | ...... |
| Pine Siskin | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... |
| Am. Goldfinch | 280 | 200 | 7 | 86 | 300 | ...... | 37 | 52 | 132 | 65 | 12 | 23 | 63 | 189 |
| Red Crossbill | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 6 |
| Ruf-sd. Towhee | 134 | 1 | 4 | 36 | 151 | 1 | 39 | 67 | 47 | 4 | 3 | 6 | ...... | 3 |
| Savannah Sparrow | 21 | ...... | ...... | 15 | 1 | ...... | ...... | 4 | 1 | 5 | ...... | ...... | ...... | ...... |
| Vesper Sparrow | ...... | ...... | ...... | 12 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Slate-col. Junco | 905 | 250 | 47 | 92 | 676 | 21 | 59 | 436 | 163 | 401 | 26 | 144 | 85 | 192 |
| Oregon Junco | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Tree Sparrow | ...... | 6 | ...... | ...... | 15 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Chipping Sparrow | ...... | ...... | 2 | ...... | ...... | ...... | ...... | 4 | 3 | ...... | ...... | ...... | ...... | ...... |
| Field Sparrow | 191 | 14 | 35 | 37 | 215 | ...... | 26 | 127 | 84 | 196 | 18 | 16 | 18 | 60 |
| Harris' Sparrow | 1 | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| White-cr. Sparrow | 1 | ...... | 125 | 34 | 104 | 9 | 2 | 5 | 11 | ...... | 40 | ...... | ...... | 3 |
| White-th. Sparrow | 1,725 | 400 | 60 | 210 | 241 | 2 | 39 | 194 | 249 | 161 | 35 | 119 | 22 | 51 |
| Fox Sparrow | 64 | 3 | 1 | 14 | 23 | 3 | ...... | 14 | 6 | 5 | ...... | 1 | ...... | 11 |
| Swamp Sparrow | 234 | 1 | ...... | 56 | 96 | ...... | 11 | 8 | 12 | 3 | ...... | ...... | ...... | 3 |
| Song Sparrow | 483 | 200 | 30 | 105 | 203 | 1 | 10 | 75 | 232 | 135 | 28 | 43 | 59 | 57 |
| Lapland Longspur | 3 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| **SPECIES** | **64** | **78-1** | **49** | **71** | **71** | **48** | **45** | **66** | **65** | **57** | **43** | **55** | **39** | **51** |
| Individuals | 308,228 | 480,927 | 101,505 | 22,993 | 12,879 | 117,637 | 1,363 | 5,237 | 6,003 | 3,380 | 3,514 | 1,901 | 3,119 | 2,506 |

ROAN MOUNTAIN, Tenn. - N. C.—(All points within a 15 mile diameter circle, center Carvers Gap at 5,500 ft.; Balsam Road for its entire length; Balsam Seed Orchard; Rhododendron Gardens; Round Bald (5,500-6,200 ft.); coniferous forest, 75%; grass bald 15%; briar-rhododendron-alder 10%. 27 Dec.; 7:30 a. m. to 5 p. m.; fog, limiting visibility at times to 250 ft., sunny; temp. 39° - 42°; wind SW 3-15 m.p.h.; ground firm to soft. One observer. Total hours, 10 (all on foot); total miles, 8 (all on foot). Grouse, 3; Blue Jay, 8; Raven, 1; Crow, 2; Red-breasted Nuthatch, 9; Winter Wren, 1; Robin, 4; Goldfinch, 1; Junco, 9. Total, 9 species; 38 individuals. Fred W. Behrend.

## ROUND TABLE NOTES

EGYPTIAN GOOSE IN GREENE COUNTY.—On 28 October, 1964, an Egyptian Goose *(Alopochen aegyptiacus)* came to the farm pond of Fred and Rankin Simpson approximately eight miles northwest of Greeneville, Tennessee. Surrounding the pond is a large hog lot in which whole corn is fed to hogs every day. On the pond is a mixed group of ducks and geese, both tame and wild, including one Snow Goose.

Upon being told of the strange goose on the pond members of the Greeneville chapter of T.O.S. made numerous trips to observe the strange bird. No members had seen anything like it before. It was odd enough that it was fairly simple to identify. The first observers could not find such a bird in the field guides, but one member located the goose in **Birds of the World,** by Austin, Oliver L. Jr. and Arthur Singer. Dr. Lee R. Herndon, using a telephoto lens, took several photographs of the goose. One of those photographs is included in this issue.



The sounds made by the Egyptian Goose which would compare with the honk of the Canada Goose is more drawn out, a descending sound somewhat like "ha aa lp" and being much longer than the honk of the Canada. Another sound which is similar to the quack of a duck but more drawn out and sounding like "qounk" is repeated rapidly. The Egyptian Goose is long on legs and short on neck. The legs being like a Canada and the neck more like a duck. The legs were pink, (described by one member as shocking pink), the back was deep gray, the sides pearl gray, and some buff on the lower neck. The upper neck and head were somewhat darker than the lower neck and it appeared to have a reddish ring around the neck where the two shades merged. There was a dark brown or black spot the size of a silver dollar about the center of the breast. The bill was whitish with several straight line black marks toward the base. The bill tip was black with black also around the nostrils. The lower mandible appeared to be pink. The eye was yellow with bright reddish brown ringing it. In flight there was a large white area in the fore edge of the wing and a thin black line through the white, parallel to the length of the wing. The goose seemed to be more colorful at the back than the front; it had bright buff under-tail coverts, a deep green tail with a red-brown above the green.

The goose was at home on the water or land and was not afraid of hogs or calves and could take flight from the land as well as from the water. It stayed with the flock while on the pond but seemed to prefer to be away from them when on land and would make short dashes at some of the other members of the flock as if to fight.

Being unfamiliar with Egyptian Geese and unable to find information on them we asked the help of Mr. J. B. Owen, Knoxville. Mr. Owen found that there was none on game farms in Tennessee, that they were bad to fight. Mr. J. T. Mengel, Knoxville, provided the information that Egyptian Geese have been released in Florida to replace the decreasing supply of water fowl there. Florida has habitat similar to that of the Nile Valley in which the geese thrive. In Dade county, Florida, 72 of the geese had been released, early this year many of them were nesting or had young. Egyptian Geese can take care of themselves in the wild. They have a long history of living around water holes infested by crocodiles and visited by predators from over land.

The Egyptian Goose stayed on the Simpson pond about two weeks after the first arrival then left at the beginning of a short cold spell in November. It stayed away for two to three weeks and returned. The second time it stayed about two weeks and left again. The Simpsons considered the goose to be restless and not completely at home both times it came to the pond.

It was observed through binoculars and telescopes and with the bare eyes. It could be approached on foot to within 15 to 20 feet and was not afraid of humans.

RICHARD NEVIUS, Greeneville.

NOTE ON CONNECTICUT WARBLER. — Due to the prevalent let-up of interest in birding each year following the Spring Count, I think we miss not only some good birds, but some important migration facts. This was brought forcibly to my attention during the Spring of 1962 when I continued my daily surveillance of a certain area near Chattanooga through the 21st of May.

On the 8th of May, Fred Haerich and I discovered a male Connecticut Warbler in a low pine sapling approximately 4 feet above the ground. We studied it closely noting all field marks until it flew into a very thick undergrowth nearby. We felt fortunate to see this seldom seen warbler.

Then as I was making the same trek on May 14, I discovered another male—again in the same type habitat—in low pine saplings. On this occasion he sang several times. Incidentally the song was almost identical to the one recorded in **A Field Guide to Bird Songs.**

Following the sighting of this second individual, I found a third one again singing. This time, however, the habitat was a dense honeysuckle tangle. While both birds were found on May 14, they were discovered about ¼ mile apart.

I can't help but wonder if we would find the Connecticut Warbler more often if we watched for it during the month of May. This will of course depend on further observation.

JAMES A. TUCKER, 535 Forest Dr., Melbourne, Fla.

WOUNDED OSPREY AT BOONE LAKE. — On 8 October 1962, Mr. N. W. Riley of Bristol, Tenn. found an injured Osprey *(Pandion haliaetus)* perched on a rock at Boone Lake. It was about 4:00 p. m. when Mr. Riley captured the bird and placed it in a burlap bag. Bob Quillen informed me of the capture and we were able to secure the bird that night and took it to Dr. M. A. Jones, DVM for treatment. The right wing had been broken by what appeared to have been a bullet. The bone was set and four stitches taken and splinted to secure the wound. The bird was administered shots of penicillin and terramycin to combat infection. The bird was placed in a cage and for the next twelve days, force fed on Kaplin and Round Whiting, which is used for Penguin food, secured from a local frozen food supply company. On 20 Oct., examination of the wound revealed that the wing was perishing due to the severe injury to the main blood vessels and that the wound could not heal. Dr. Jones dispatched the bird.

Some measurements of the bird were: wing — 15.50", wing span — 60.25", tarsus — 3.36", tail — 8.75" and bill — 1.31". Sex was not determined.

WALLACE COFFEY, 508 Spruce Street, Bristol, Tenn.

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CEDAR WAXWING NESTING IN SHADY VALLEY. — On 9 June 1962, the nest of a pair of Cedar Waxwings *(Bombycilla cedrorum)* was located on the farm of Roby McQueen in Shady Valley at an elevation of about 2,800'. The nest containing four eggs was saddled in the fork of an apple tree about 25' above ground. The birds were in the vicinity and one bird was observed on the nest. Kenneth Dubke, Roby McQueen, Enno and Roger van Gelder made the observations with me. Because of his small size, Roger was chosen to climb the tree and check for eggs. He reported that the nest contained four eggs which he described as being rather blue or gray with brown spots. This description matches that of a Cedar Waxwing egg which I have in an egg collection given to me by Mr. W. D. Hagey, who collected this egg in Bristol, Tenn. during August 1933 at an elevation of 1,672'. This egg measured 21mm by 15mm.

On 23 June Mr. McQueen reported that the nest had been destroyed before the eggs hatched.

WALLACE COFFEY, 508 Spruce St., Bristol, Tenn.

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TRAFFIC CONTROL.—Ashland City, County seat of Cheatham County, has two traffic lights in front of the Courthouse. These lights have a fairly common type of "blinder" on them, beaming the signal straight ahead, so it cannot be seen from the side. The blinders consist of a metal cylinder about 8" in diameter, and about the same length, fitted over each of the lights. On a fourway signal, with three lights on each side, this accounts for 12 protected nesting places.

In the summer of 1960, Starlings repeatedly tried to nest in these lights, and the City fathers as frequently tore down the nests.

In the summer of 1961, Rough-winged swallows tried to nest, but were discouraged and left when their nests were destroyed.

In the spring of 1962, Purple Martins moved in. Their nests were pulled down once, but they returned and were not molested any more. By estimate, six to ten pairs of martins successfully nested.

LOUIS FARRELL, Nashville TOS.

# OBITUARIES

GEORGE RADFORD MAYFIELD.—The passing of George Radford Mayfield, one of the five founders of the Tennessee Ornithological Society, brought to a close a long life of service in behalf of popularizing the study of birds and also in behalf of conservation of all forms of wildlife.

Born on a farm near Lawrenceville, Ga., 21 March, 1877, his family moved to Atlanta where he completed his preparatory schooling, following which he entered and graduated from Emory University, B. A. 1900. He then came to Vanderbilt University at Nashville, where he taught Latin and Greek while qualifying himself for an A. M. degree in 1904 and a Ph. D. in 1915. He continued at Vanderbilt, as a teacher of German becoming a full Professor, a post he held until his retirement in 1947. About four years ago he had the misfortune to suffer a broken hip and became inactive after that time. He passed away peacefully on 17 December, 1964, at the advanced age of eighty seven. He is survived by his wife, Lillie Haslock Mayfield, herself a member of the T. O. S. since 1918, and by a son, Dr. George R. Mayfield, Jr., of Columbia, Tenn.

Of perhaps greatest interest to readers of this sketch, is the fact that Dr. Mayfield was one of the five founders of the T. O. S. They were all men of maturity, became close friends, addressed each other by their surnames and having come to know each others interest in birds, decided to cooperate by organizing a bird-study club. This was effected 7 October, 1915 and at that initial meeting, the name Tennessee Ornithological Society was decided upon. Twenty years later, the organization having prospered, the four surviving founders, Ganier, Mayfield, Merritt and Webb, combined to write a history of the T. O. S. and this may be found in the September, 1935 issue of THE MIGRANT.

George Mayfield was an excellent writer and used this talent to acquaint the general public with the interest to be derived from the study of birds, or "bird watching" as it has later been called. He wrote several articles for the Nashville papers on various phases of bird life before THE MIGRANT came into being. He was also chairman of the T. O. S. committee which conducted a poll among Tennessee School children for the selection of a State Bird. Some 75,000 votes were cast; the net result being that the Mockingbird was chosen and a vast number of children were set to pondering their preference of the fifteen birds that had been nominated and described.

When the Tennessee Academy of Science decided to begin publishing its quarterly, in 1926, Mayfield was selected to become editor of its publication, **The Journal**, and continued in this capacity for several years, then passing the baton to a fellow T. O. S. member, Dr. Jesse M. Shaver. His interest in all phases of wildlife brought him an appointment to the Tennessee Conservation Commission during the years of his retirement and he was soon elevated to its chairmanship. During these years, he was invited by the Nashville Banner to prepare its weekly nature column, **Fin, Fur and Feathers**, and he conducted this newsy column from 1948 to 1958. He contributed a number of articles and Round Table notes to THE MIGRANT and always attended the Annual Meetings and Field Days of the Society.

Our subject will be best remembered by his fellow members as an ardent field observer and enthusiastic companion. On each day that he went afield he carried a bird-listing card, jotting down upon it the number of each species found and carefully filing them for future reference. This had been standard procedure for T. O. S. members from the beginning and Mayfield was a strict practitioner. During W. P. A. days, these cards were worked over by employees for that agency and the recordings were transferred to cards for each species observed, noting thereon the dates and numbers found on each observation.

His strongest forte was the capability he had developed of identifying birds by their songs, call-notes or by any audible sounds they might utter. Having a keen ear and a retentive memory, he had developed this technique to a point that was quite remarkable. He also applied this knowledge to studying songs of the Mockingbird, to identify and list the number of species the Mocker had learned to imitate.

Many other activities of university and civic life might be listed in which he engaged or lent his interest. Among these was the Nashville Children's Museum, of which he was a member of the first board of directors. He held memberships in the American Ornithologists Union, The Wilson Ornithological Society, Georgia Ornithological Society and of course, the T. O. S. As a member of the latter, he was a most loyal worker and rarely missed a meeting. He was a past-president of the State organization as well as of the Nashville Chapter.

George Mayfield was blessed with the good fortune to have lived a long and active life and his fellow T. O. S. members and friends will cherish memories of a valued and rewarding association.

ALBERT F. GANIER.

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REV. YATES MOORE.—By the death of Reverend Yates Moore on 17 December, 1964, our Memphis Chapter lost a dedicated member. He is survived by his wife, a daughter, Miss Nelle Moore, a son, Mr. Hunt Moore, and three grand children, all active members of our organization.

Reverend Moore was a graduate of Vanderbilt University and as a member of the Memphis Conference of the Methodist Church served as pastor of churches throughout West Tennessee.

His passing has left a vacancy not only in our organization but within the hearts of those who knew and loved him. His ardent devotion to humanity and his love for everything beautiful and good which would make a better world endeared him to his many friends.

ELLA RAGLAND.

MAXWELL E. BENSON.—On 16 December, 1964 the Nashville Chapter lost one of its most enthusiastic and deightful members in the death of Mr. Maxwell E. Benson, who died after a short illness. He was 62 years old.

At the time of his death he was assistant to the Chairman of the Board of Genesco, and for thirty years there had hardly been any area of civic, cultural or religious life in Nashville in which he did not play an active and an important role. To mention a few from among a great many, he was a founder and trustee of Nashville's Children's Museum, and it was in a large measure due to his efforts that it has become one of the country's finest museums. He was a founder and board member of the Nashville Conservatory of Music, a founder and trustee of the Symphony Society and the Community Playhouse. He was an author of national prominence having written many articles for professional magazines, contributed to the literary page of newspapers and had authored, or co-authored, several books in such areas as church histories and sports. In his chosen field of public relations he had received national recognition for his work on Government committees and national professional societies and organizations. He had always given generously of his time and support to numerous charitable activities, having at one time or another served on the board of directors of the Red Cross, the Community Chest, the Salvation Army, and many others.

He and his wife, Katie, did not join T. O. S. until 1960, but their intense interest in birds, as in nature in general, was of long standing. As in every activity Max entered into, his enthusiasm, charm and delightful sense of humor were immediately felt, and the Chapter benefitted greatly. The programs he gave and his performance as toastmaster at our 1963 annual dinner were events which upheld his wide reputation as a speaker. It was largely through his efforts that Mrs. H. G. Knauth's bird column, "Wing Tips", has become a weekly feature of the Nashville Banner.

His last T. O. S. program was on 12 November. His subject, "Adventures of a Little Boy in Wildflowerland", told the delightful story of the enthusiasm, the sweat and the pleasures he had experienced in developing his wonderful wildflower garden. This project in a way was so typical of the ardent zeal of his whole life, and because of this characteristic, to know Max Benson was to love him. We will all miss him greatly.

LAURENCE TRABUE.

## PRESIDENT'S MESSAGE

Dear T. O. S. Members:

When you receive this issue of THE MIGRANT, the time for our Annual State Meeting will be fast approaching.

Don't forget this is our 50th anniversary year, and we want to do honor to our Founders by having a large attendance. The dates will be 30 April, 1 and 2 May and the meeting will be in Nashville. Therefore, the distance will not be so great for anyone as it sometimes is when we meet East or West.

Mr. John S. Herbert, President of the Nashville Chapter, tells me he hopes to have advance information in your hands early in March.

Here's hoping to see you in Nashville!

Sincerely,
SUE BELL

# BOOK REVIEW

THOREAU ON BIRDS.—Compiled and with commentary by Helen Cruickshank. McGraw-Hill Book Company, 330 West 42nd Street, New York, N. Y. 1964. 331pp. $7.95.

Mrs. Cruickshank has expertly assembled Thoreau's notes on birds in the vicinity of Concord so that for each species his notes are arranged in chronological order although a few days or perhaps a few years may elapse between references. She compares current status with those of a little over a century ago. Her comments are clearly set apart from those of Thoreau's vivid notes so there is no confusion between the two authors.

It is to be remembered that comparatively little had been written on birds by 1850, and about all the sketches and paintings of birds available were those of Wilson, Audubon, and a few by Nutall. A few of these are reproduced in this book, however, they do not compare favorably with our present day artists and colored reproductions. Neither was Thoreau equipped with the fine optical instruments available today. During the later years of his life he possessed a telescope, of a sort, which aided him greatly in his observations and identifications. The common names of birds were not as clearly delineated as they are today and they were confusing, so that in many cases, classes of birds were lumped together. An alphabetical list of birds Thoreau knew is given with the correct ornithological names.

Thoreau spent a great deal of time out of doors and enjoyed his experiences as indicated by his notes and he shared them with his neighbors who in turn frequently passed information on to him.

A quotation from his notes will give a clearer illustration of his style of writing than I could possibly give. A portion of a paragraph from page 172 follows: "June 1. (1857) I hear the note of a bobolink concealed in the top of an apple tree behind me. Though this bird's full strain is ordinarily somewhat trivial, this one appears to be meditating a strain as yet unheard in meadow or orchard. *Paulo majora canamus.* He is just touching the strings of his theorbo, his glassichord, his water organ, and one or two notes globe themselves and fall in liquid bubbles from his teeming throat. It is as if he touched his harp within a vase of liquid melody, and when he lifted it out, the notes fell like bubbles from the trembling strings. Methinks they are the most *liquidly* sweet and melodious sounds I ever heard. They are refreshing to my ear as the first distant tinkling and gurgling of a rill to a thirsty man."

Thoreau's writings have not contributed significantly to ornithological literature, however, his impressions are expressed picturesquely and Mrs. Cruickshank has selected the cream of his notes for publication here and corrected some impressions which, otherwise are misleading.

For those who are interested in reading about birds and are not particularly interested in learning something new, this book offers fascinating reading and a vivid description of the Concord area at all seasons of the year.

LEE R. HERNDON, 1533 Burgie Place, Elizabethton, Tenn.

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  Bullock's—**1962:** 17.
  Orchard—**1962:** 31, 47; **1963:** 23, 33; **1964:** 36, 38, 39, 42, 43, 48, 62.
Osprey—**1962:** 28, 50; **1963:** 2, 3, 4, 5, 22, 23, 30, 52, 53, 60, 61, 62, 73, 79, 96; **1964:** 10, 31, 38, 40, 41, 42, 45, 66, 101, 104, 105, 117.
Ovenbird—**1962:** 6, 8, 27, 31, 59; **1963:** 15, 33, 34, 56, 66, 68, 69, 70; **1964:** 36, 39, 41, 43, 48, 53, 64, 95, 96, 101, 104, 105.
Owl, Barn—**1962:** 29, 50, 51, 68; **1963:** 22, 52, 73, 74, 81, 83, 86; **1964:** 41, 46, 49, 62, 109, 112.
  Barred—**1962:** 29, 35, 65, 68; **1963:** 31, 52, 79, 83, 86; **1964:** 46, 106, 112.
  Burrowing—**1963:** 7.
  Great Horned—**1962:** 8, 16, 29, 68; **1963:** 31, 52, 75, 77, 83, 86; **1964:** 38, 39, 46, 62, 104, 106, 112.
  Screech—**1962:** 29, 68, 71; **1963:** 31, 52, 55, 56, 73, 79, 83, 86, 96; **1964:** 46, 112.
  Short-eared—**1963:** 7.
  Snowy—**1964:** 71.
Pelican, White—**1963:** 71.
Penguin—**1962:** 40.
Pewee, Eastern Wood— **1962:** 29, 59; **1963:** 15, 23, 32, 66, 73; **1964:** 39, 43, 46, 102, 104.
Phalarope, Northern—**1963:** 92; **1964:** 94.
  Red—**1963:** 31, 75, 92, 96; **1964:** 94, 102.
  Wilson's—**1963:** 28, 31.
Pheasant, Hybrid—**1962:** 54, 77.
  Ring-necked—**1963:** 30, 54; **1964:** 39, 42, 45.
Phoebe, Eastern—**1962:** 10, 27, 29, 36, 63, 68; **1963:** 11, 23, 31, 41-49, 74, 80, 84, 88, 95; **1964:** 15, 31, 39, 43, 46, 113.
Pintail—**1962:** 9, 12, 18, 49, 67; **1963:** 13, 53, 72, 79, 82; **1964:** 14, 35, 103, 111.
Pipit, Sprague's—**1963:** 7, 8.
  Water—**1962:** 10, 30, 69; **1963:** 78, 79, 84, 89; **1964:** 40, 47, 113.
Plover, American Golden—**1962:** 9, 12, 13, 47, 48; **1963:** 7, 9, 31, 49, 71; **1964:** 14, 30, 46, 102.
  Black-bellied—**1962:** 9; **1963:** 51.
  Piping—**1962:** 12.
  Semipalmated—**1962:** 9, 12, 26, 28, 48, 50, 52; **1963:** 9, 31, 49, 79; **1964:** 43, 46, 61, 66, 106.
  Upland—**1962:** 47, 48; **1963:** 31, 51; **1964:** 38, 46, 50, 102.
Poor-will—**1962:** 61.
Puffin—**1963:** 40, 95.
Rail, Black—**1964:** 59, 60, 64.
  King—**1963:** 20, 21, 28, 29, 30; **1964:** 45.

Virginia—**1962:** 48; **1963:** 20, 21, 30, 66, 75, 95; **1964:** 39, 59, 64, 96, 101, 102.
Raven—**1962:** 3, 4, 29, 69, 71; **1963:** 32, 84, 88, 89; **1964:** 47, 110, 113, 115.
White-necked—**1962:** 61.
Redhead—**1962:** 9, 17, 18, 28, 49, 64, 65, 67; **1963:** 13, 30, 53, 72, 79, 81, 82; **1964:** 14, 19, 35, 42, 45, 101, 103, 105, 108, 111.
Redstart, American — **1962:** 8, 31, 50, 59; **1963:** 15, 33, 34, 56, 66, 68, 69, 70; **1964:** 37, 38, 43, 48, 53, 96, 101, 104, 105.
Robin—**1962:** 5, 6, 13, 14, 16, 18, 30, 64, 69, 72; **1963:** 8, 11, 32, 39, 72, 78, 81, 84, 88; **1964:** 15, 19, 47, 110, 113, 115.
Sanderling—**1962:** 10, 13; **1963:** 9, 52, 73; **1964:** 15.
Sandpiper, Baird's—**1962:** 48, 52; **1963:** 57.
Buff-breasted — **1962:** 10; **1963:** 54, 47, 58, 59, 60, 96.
Least—**1962:** 24, 26, 29, 49, 51, 52; **1963:** 7, 8, 31, 37, 49, 50, 51, 54, 57, 79; **1964:** 16, 36, 38, 43, 46, 61, 63, 65, 66, 101, 102, 103.
Pectoral—**1962:** 12, 21, 24, 25, 26, 29, 48, 51, 52, 76; **1963:** 7, 9, 31, 54, 57, 79; **1964:** 46, 61, 66, 94, 101, 102, 106.
Red-backed—(see Dunlin).
Semipalmated—**1962:** 12, 26, 29, 50, 51, 52; **1963:** 31, 49, 50, 54, 57; **1964:** 36, 37, 38, 43, 61, 63, 65, 101, 102.
Solitary—**1962:** 9, 26, 28, 48, 52; **1963:** 31, 49, 50, 54, 57; **1964:** 15, 39, 43, 46, 61, 63, 94, 104.
Spotted—**1962:** 9, 13, 26, 28, 48, 51, 52, 55; **1963:** 23, 31, 37, 50, 54, 57, 79; **1964:** 15, 36, 43, 46, 61, 65, 101, 102, 104.
Stilt—**1962:** 24, 26, 48, 52; **1963:** 9, 49; **1964:** 61, 101, 106.
Western — **1962:** 26, 29; **1963:** 54; **1964:** 15, 66.
White-rumped—**1963:** 49; **1964:** 35.
Sapsucker, Yellow-bellied—**1962:** 3, 6, 29, 68; **1963:** 8, 13, 31, 74, 77, 83, 88, 90; **1964:** 38, 41, 43, 46, 96, 106, 113.
Scaup, Greater—**1962:** 9, 13, 27, 28, 48, 55; **1963:** 79, 81, 82; **1964:** 17, 42.
Lesser—**1962:** 9, 17, 28, 55, 67; **1963:** 9, 13, 22, 30, 37, 50, 53, 76, 77, 79, 82; **1964:** 14, 19, 35, 37, 39, 40, 45, 66, 101, 103, 104, 105, 111.
Scoter, Surf—**1962:** 9; **1963:** 9.
White-winged—**1964:** 42.
Shoveler—**1962:** 9, 15, 18, 28, 49, 67; **1963:** 13, 30, 79, 82, 89; **1964:** 111.
Shrike, Loggerhead—**1962:** 10, 30, 51, 69; **1963:** 32, 84; **1964:** 30, 47, 65, 66, 92, 104, 113.
Migrant—**1964:** 94.
Northern—**1964:** 89-94, 104.
Siskin, Pine—**1962:** 12, 13, 17, 18, 31, 47, 56, 65, 70; **1963:** 9, 13, 33, 39, 63, 71, 73, 74, 76, 78, 80, 85, 87, 88, 89, 93; **1964:** 14, 15, 16, 17, 18, 20, 25-30, 35, 36, 37, 38, 39, 41, 44, 48, 114.
Snipe, Common—**1962:** 9, 28, 68; **1963:** 7, 31, 54, 74, 79, 83; **1964:** 39, 43, 46, 63, 101, 102, 103, 106, 112.
Sora—**1962:** 7, 28, 48; **1963:** 7, 21, 28, 29, 31, 51, 66; **1964:** 42, 45, 59, 63, 96, 105.
Sparrow, Bachman's — **1962:** 31, 50; **1963:** 25, 29, 33; **1964:** 39, 48.
Chipping—**1962:** 8, 31, 70; **1963:** 8, 9, 10, 15, 34, 50, 73, 85; **1964:** 39, 44, 48, 96, 105, 114.
Field—**1962:** 7, 8, 10, 18, 31, 70; **1963:** 11, 12, 15, 34, 66, 85, 90; **1964:** 48, 64, 96, 114.
Fox—**1962:** 7, 70; **1963:** 8, 39, 73, 76, 78, 80, 85; **1964:** 16, 36, 37, 40, 48, 49, 54, 96, 103, 106, 114.
Grasshopper—**1962:** 7, 8, 31; **1963:** 9, 15, 33; **1964:** 39, 42, 44, 48, 96, 106.
Harris'—**1962:** 63, 64, 70; **1963:** 8, 73; **1964:** 36, 48, 49, 107, 114.
House—**1962:** 10, 31, 69, 72; **1963:** 12, 33, 49, 70, 84, 90; **1964:** 48, 114.
Lark—**1962:** 47; **1963:** 9, 50, 51, 74, 85, 87; **1964:** 17, 36, 48, 49, 72.
LeConte's—**1963:** 28, 33, 71, 85.
Lincoln's—**1962:** 8, 13, 31, 63, 65, 70; **1963:** 8, 73, 85, 87; **1964:** 38, 49, 96, 103, 106.
Savannah—**1962:** 8, 10, 31, 70; **1963:** 15, 28, 33, 66, 80, 85, 90; **1964:** 20, 42, 44, 48, 96, 105, 114.
Sharp-tailed—**1964:** 95, 96.
Song—**1962:** 10, 18, 31, 70, 72; **1963:** 10, 11, 15, 34, 35, 66, 73, 76, 85, 90;

**1964:** 49, 54, 96, 101, 114.
Swamp—**1962:** 8, 31, 70; **1963:** 8, 13, 15, 34, 66, 68, 69, 73, 85, 90; **1964:** 40, 44, 49, 96, 101, 105, 106, 114.
Tree—**1962:** 63, 70; **1963:** 50, 85; **1964:** 14, 108, 114.
Vesper—**1962:** 10, 31, 50, 70; **1963:** 33, 73, 80, 85; **1964:** 39, 42, 44, 48, 54, 105, 114.
White-crowned—**1962:** 17, 31, 64, 70; **1963:** 11, 12, 34, 73, 78, 85; **1964:** 36, 39, 41, 44, 48, 95, 96, 102, 106, 114.
White-throated—**1962:** 8, 18, 31, 70; **1963:** 8, 10, 11, 15, 34, 39, 66, 73, 76, 78, 85, 90; **1964:** 39, 41, 44, 48, 96, 101, 106, 114.
Starling—**1962:** 10, 14, 15, 16, 18, 19, 30, 53, 69, 72, 76; **1963:** 8, 10, 23, 32, 53, 74, 80, 81, 84; **1964:** 14, 15, 17, 18, 29, 47, 65, 108, 113, 117.
Swallow, Bank—**1962:** 10, 29, 47, 49, 50, 51; **1963:** 32, 49; **1964:** 41, 46, 66, 106.
Barn—**1962:** 10, 12, 29, 47, 49, 50, 51; **1963:** 23, 32, 48, 49, 50; **1964:** 38, 39, 41, 43, 46, 104, 106.
Cliff—**1962:** 29, 47, 53; **1963:** 32, 49, 75; **1964:** 35, 38, 41, 46, 52, 65, 66.
Rough-winged—**1962:** 10, 29; **1963:** 32, 75; **1964:** 16, 39, 41, 43, 46, 51, 117.
Tree—**1962:** 10, 12, 29, 50; **1963:** 7, 13, 23, 32, 49, 50, 71; **1964:** 41, 43, 46, 51, 66, 102, 106.
Swan, Whistling—**1964:** 16.
Swift, Chimney—**1962:** 3, 7, 10, 29, 53, 54, 77; **1963:** 31, 33, 71, 72; **1964:** 39, 41, 43, 46, 63, 102, 104, 106.
Tanager, Scarlet—**1962:** 8, 27, 31; **1963:** 33, 34, 52, 56; **1964:** 36, 38, 39, 42, 43, 48, 62, 96, 102.
Summer—**1962:** 7, 31; **1963:** 23, 34, 56; **1964:** 36, 39, 42, 48, 96, 102, 105.
Teal, Blue-winged—**1962:** 9, 15, 28, 49, 50, 51, 55, 67; **1963:** 10, 11, 13, 30, 53, 72, 79; **1964:** 37, 39, 40, 42, 45, 63, 64, 65, 101, 105, 111.
Green-winged—**1962:** 9, 18, 48, 67; **1963:** 82, 89; **1964:** 37, 42, 103, 105, 111.
Tern, Black—**1962:** 10, 47, 49; **1963:** 31, 50, 51; **1964:** 15, 104.
Caspian—**1962:** 10, **1963:** 37, 51, 54, 72, 79; **1964:** 63, 65, 104, 106.
Common—**1962:** 10, 29, 49, 51; **1963:** 9, 54, 72; **1964:** 39, 46, 63, 65, 106.
Forster's—**1962:** 10; **1963:** 9, 31, 49, 51, 75; **1964:** 41, 43, 46, 63, 102.
Least—**1963:** 22.
Thrasher, Brown—**1962:** 10, 15, 17, 30, 63, 69, 73; **1963:** 10, 11, 12, 13, 32, 66, 81, 84; **1964:** 39, 41, 43, 47, 70, 96, 113.
Thrush, Gray-cheeked — **1962:** 7, 30, 51; **1963:** 28, 32, 34, 49, 50, 51, 56, 66; **1964:** 36, 39, 47, 96, 104, 106.
Hermit—**1962:** 7, 18, 63, 69; **1963:** 13, 66, 79, 84; **1964:** 47, 49, 96, 102, 106, 113.
Swainson's—**1962:** 7, 18, 30, 51; **1963:** 15, 32, 34, 50, 51, 56, 66, 67, 68, 75; **1964:** 36, 39, 43, 47, 53, 62, 96, 104, 106.
Willow (see Veery).
Wood—**1962:** 5, 7, 13, 30; **1963:** 9, 15, 23, 32, 34, 56, 66, 75; **1964:** 36, 38, 41, 47, 53, 96.
Titmouse, Tufted—**1962:** 14, 27, 29, 69, 71, 72; **1963:** 11, 32, 84, 88, 90; **1964:** 17, 47, 113.
Towhee, Rufous-sided — **1962:** 31, 70; **1963:** 11, 33, 85, 90; **1964:** 48, 62, 114.
Turkey—**1962:** 28, 37, 40, 61, 62, 77; **1963:** 81, 83; **1964:** 112.
Turnstone, Ruddy—**1963:** 54; **1964:** 1, 15.
Veery—**1962:** 5, 7, 30; **1963:** 15, 32, 34, 39, 56, 66, 67, 75; **1964:** 36, 43, 47, 62, 64, 96.
Vireo, Philadelphia — **1962:** 7, 30, 50, 59; **1963:** 15, 66, 68; **1964:** 39, 47, 53, 96, 101, 102, 103.
Red-eyed—**1962:** 7, 30, 59; **1963:** 15, 32, 56, 66, 68, 70, 76; **1964:** 43, 47, 53, 95, 96, 101.
Solitary—**1962:** 5, 17, 27, 30, 49; **1963:** 9, 23, 39; **1964:** 43, 47, 96, 102.
Warbling—**1962:** 30; **1963:** 8, 23, 32, 50; **1964:** 39, 43, 47, 62, 64, 96, 101.
White-eyed—**1962:** 7, 27, 30; **1963:** 23, 32, 56; **1964:** 35, 41, 43, 47, 96, 101, 105.
Yellow-throated — **1962:** 30, 50, 59;

**1963:** 15, 32, 66; **1964:** 37, 39, 43, 47, 53, 65, 96, 102.
Vulture, Black—**1962:** 28, 50, 67; **1963:** 12, 13, 30, 76, 83, 88, 89, 90; **1964:** 42, 45, 66, 104, 105, 109, 112.
  Turkey—**1962:** 2, 28, 67; **1963:** 12, 13, 30, 76, 77, 79, 82, 89, 90; **1964:** 18, 45, 104, 109, 112.
Warbler, Bay-breasted — **1962:** 8, 30, 50, 51, 59; **1963:** 15, 33, 34, 37, 66, 68, 69, 70, 75; **1964:** 36, 48, 53, 62, 95, 96, 105.
  Black and White—**1962:** 7, 27, 30, 59; **1963:** 8, 15, 32, 34, 56, 66, 68, 70, 76; **1964:** 35, 37, 39, 41, 43, 47, 96, 101.
  Blackburnian — **1962:** 8, 30, 50, 59; **1963:** 15, 33, 34, 38, 50, 52, 56, 66, 68, 69; **1964:** 43, 48, 53, 62, 96, 102, 104, 105.
  Blackpoll—**1962:** 30, 59; **1963:** 23, 29, 33, 35, 38; **1964:** 40, 43, 48, 53, 62, 95, 96, 105.
  Black-throated Blue—**1962:** 5, 7, 8, 13, 27, 30; **1963:** 33, 34, 39, 52; **1964:** 47, 64.
  Black-throated Green—**1962:** 8, 27, 30, 59; **1963:** 8, 15, 33, 34, 38, 51, 52, 66, 73; **1964:** 39, 43, 47, 53, 62, 96, 101, 105.
  Blue-winged—**1962:** 13, 30, 50; **1963:** 32, 50, 66; **1964:** 37, 47, 52, 56, 105.
  Brewster's—**1963:** 73; **1964:** 37, 52.
  Canada—**1962:** 6, 7, 8, 31, 48, 50, 59; **1963:** 15, 29, 33, 38, 39, 52, 66; **1964:** 41, 43, 48, 53, 62, 63, 64, 96, 105.
  Cape May—**1962:** 30, 50; **1963:** 33, 38, 52, 56, 75; **1964:** 47, 52, 105.
  Cerulean—**1962:** 30, 59; **1963:** 33; **1964:** 36, 43, 47.
  Chestnut-sided—**1962:** 8, 30, 49, 50, 59; **1963:** 15, 33, 34, 38, 39, 49, 50, 51, 52, 56, 66, 68, 69, 70; **1964:** 36, 39, 43, 48, 53, 62, 96.
  Connecticut—**1963:** 28, 33, 38, 50, 52, 116.
  Golden-winged—**1962:** 13, 30, 34, 48, 50, 51, 59, 77; **1963:** 32, 51; **1964:** 43, 47, 62, 66, 96, 102.
  Hooded—**1962:** 31; **1963:** 33, 56, 76; **1964:** 37, 38, 39, 41, 43, 48, 53, 64, 96.
  Lawrence's—**1962:** 30.
  Kentucky—**1962:** 8, 31, 50, 59; **1963:** 8, 15, 33, 50, 56, 66; **1964:** 39, 41, 43, 48, 53.
  Magnolia—**1962:** 8, 30, 59; **1963:** 15, 29, 33, 34, 38, 49, 50, 52, 56, 66, 68, 69, 70, 73; **1964:** 43, 47, 53, 62, 95, 96, 102, 105.
  Mourning—**1962:** 7, 8, 13, 59; **1963:** 33, 34, 38, 49, 50, 66, 72; **1964:** 15, 95, 96.
  Myrtle—**1962:** 8, 10, 18, 30, 59, 63, 69; **1963:** 8, 10, 15, 33, 34, 66, 72, 76, 78, 80, 84; **1964:** 15, 39, 41, 47, 96, 104, 105, 106, 114.
  Nashville—**1962:** 8, 30, 59; **1963:** 15, 28, 32, 50, 66, 75; **1964:** 15, 47, 62, 96, 102, 103, 104, 105, 106.
  Orange-crowned—**1962:** 7, 8, 12, 30, 48, 63, 69; **1963:** 7, 84, 87; **1964:** 38, 47, 50, 95, 96, 102, 104, 106, 113.
  Palm—**1962:** 8, 10, 31, 59, 65, 69; **1963:** 8, 15, 33, 34, 38, 50, 66, 68, 69, 70, 73, 75, 84, 87; **1964:** 16, 43, 48, 96, 104, 105, 114.
  Parula—**1962:** 7, 8, 30; **1963:** 32; **1964:** 37, 38, 39, 43, 47, 96.
  Pine—**1962:** 30, 50, 63, 69; **1963:** 33, 84, 87; **1964:** 35, 37, 39, 43, 48, 64, 114.
  Prairie—**1962:** 30, 50; **1963:** 33, 34, 50, 56; **1964:** 39, 41, 43, 48, 64.
  Prothonotary—**1962:** 13, 30, 50, 54, 59; **1963:** 22, 23, 32, 75; **1964:** 47, 49, 101.
  Swainson's—**1962:** 30; **1963:** 32; **1964:** 30, 43, 47, 66.
  Sycamore—(see Yellow-throated).
  Tennessee—**1962:** 7, 8, 30, 50, 51, 59; **1963:** 15, 32, 34, 56, 66, 68, 70, 73, 75, 76; **1964:** 47, 53, 62, 95, 96, 102, 105.
  Wilson's—**1962:** 7, 8, 31, 48, 51, 59; **1963:** 8, 33, 38, 50, 51, 66, 72, 75; **1964:** 15, 41, 43, 48, 53, 96, 102, 105.
  Worm-eating — **1962:** 7, 8, 30, 51; **1963:** 32, 50, 56, 66; **1964:** 36, 39, 43, 47, 69, 96.
  Yellow—**1962:** 7, 8, 27, 30, 32, 59; **1963:** 33, 66; **1964:** 43, 47.
  Yellow-throated—**1962:** 8, 30, 47, 50; **1963:** 8, 33, 50, 56; **1964:** 35, 37, 39, 43, 48, 96.

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Waterthrush, Louisiana—**1962:** 27, 31; **1963:** 8, 33; **1964:** 37, 39, 41, 43, 48.
  Northern—**1962:** 8, 21, 31, 51; **1963:** 15, 33, 34, 49, 50, 51, 56, 66, 68, 69, 73; **1964:** 15, 40, 43, 48, 62, 96, 103, 105.
Water-turkey—(see Anhinga).
Waxwing, Cedar — **1962:** 16, 30, 69; **1963:** 13, 32, 39, 75, 76, 78, 84, 89; **1964:** 19, 36, 39, 41, 43, 47, 65, 102, 104, 113, 117.
Whip-poor-will—**1962:** 29, 35, 49, 51, 55, 77; **1963:** 31, 50, 71, 92, 96; **1964:** 46, 63, 96, 100, 101, 102.
Widgeon, American—**1962:** 9, 12, 18, 28, 49, 67; **1963:** 13, 30, 37, 50, 53, 76, 78, 82; **1964:** 14, 17, 19, 35, 37, 40, 42, 101, 103, 104, 105, 111.
Willet—**1963:** 29, 31, 30, 54, 95.
Woodcock, American—**1962:** 15, 16, 18, 28, 50, 63, 68; **1963:** 14, 31, 54, 71, 89, 95; **1964:** 37, 41, 52, 102, 112.
Woodpecker, Downy—**1962:** 14, 29, 68, 71, 72; **1963:** 11, 23, 31, 83, 88, 90; **1964:** 46, 112.
  Hairy—**1962:** 27, 29, 41, 68, 71, 72; **1963:** 31, 32, 83, 88; **1964:** 46, 65, 104, 110, 113.
  Imperial—**1962:** 76.
  Pileated—**1962:** 27, 29, 68, 71, 72; **1963:** 31, 83, 88; **1964:** 16, 46, 110, 112.
  Red-bellied — **1962:** 14, 27, 29, 68; **1963:** 11, 23, 31, 54, 75, 77, 83, 90; **1964:** 46, 65, 104, 113.
  Red-cockaded—**1962:** 29, 32, 40-45, 77; **1963:** 25, 31, 71, 94; **1964:** 37, 52.
  Red-headed—**1962:** 29, 49, 50, 51, 55, 63, 66, 68; **1963:** 11, 23, 31, 51, 52, 54, 66, 77, 81, 83, 89; **1964:** 8, 18, 41, 46, 61, 65, 104, 106, 113.
Wren, Bewick's—**1962:** 30, 47, 50, 69; **1963:** 11, 13, 32, 79, 84, 90; **1964:** 36, 43, 47, 66, 106, 113.
  Carolina—**1962:** 16, 30, 63, 69, 71, 72; **1963:** 11, 32, 80, 84, 90; **1964:** 47, 113.
  House—**1962:** 12, 18, 30, 47; **1963:** 32, 50, 51, 66; **1964:** 36, 41, 43, 47, 96, 113.
  Long-billed Marsh—**1962:** 13; **1963:** 8, 15, 32, 66; **1964:** 96, 104.
  Short-billed Marsh — **1962:** 65, 69; **1963:** 7, 8, 32, 66, 71, 73; **1964:** 41, 64, 66, 69, 96.
  Winter—**1962:** 5, 27, 30, 69; **1963:** 11, 13, 15, 32, 39, 78, 84; **1964:** 43, 47, 64, 96, 104, 110, 113, 115.
Yellowlegs, Greater—**1962:** 12, 26, 28, 48, 52; **1963:** 7, 8, 28, 31, 37, 54, 57, 72, 79; **1964:** 39, 43, 46, 61, 104.
  Lesser—**1962:** 9, 26, 28, 48, 52; **1963:** 7, 8, 9, 31, 54, 57, 59, 79; **1964:** 5, 16, 39, 43, 46, 61, 102, 104, 106.
Yellowthroat — **1962:** 8, 31, 59; **1963:** 15, 33, 34, 50, 56, 66, 68, 69, 70; **1964:** 16, 37, 39, 41, 43, 48, 69, 72, 96, 101, 105.

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